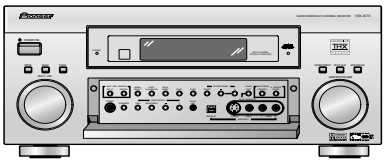
Pioneer *sound.vision.soul*

Service Manual



VSX-45TX

ORDER NO.
RRV2635

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-45TX
VSX-43TX

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
VSX-45TX	KUXJI/CA	AC120V	
VSX-43TX	KUXJI/CA	AC120V	

For details, refer to "Important symbols for good services" .

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
ⓒ**PIONEER CORPORATION 2002**

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SAFTY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

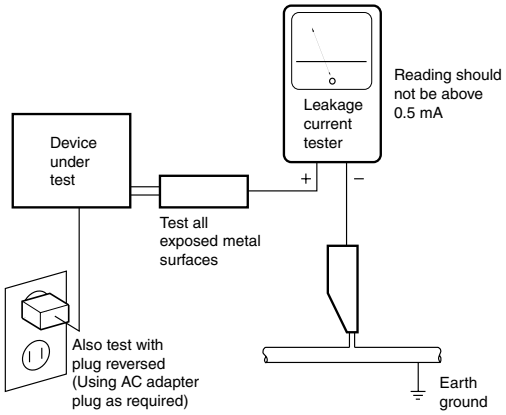
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

Amplifier Section

Continuous average power output of 100 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.09 % total harmonic distortion (front).**

Continuous Power Output
Front.....100 W +100 W (20 Hz – 20 kHz, 0.09 %, 8 Ω)
Center.....100 W +100 W (20 Hz – 20 kHz, 0.09 %, 8 Ω)
Surround.....100 W +100 W (20 Hz – 20 kHz, 0.09 %, 8 Ω)
Surround Back
.....100 W +100 W (20 Hz – 20 kHz, 0.09 %, 8 Ω)

Input (Sensitivity/Impedance)
PHONO MM (VSX-45TX).....4.7 mV/47 kΩ
VCR 1/DVR, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, CD-R/TAPE 1, MD/TAPE 2.....335 mV/47 kΩ

Frequency Response
PHONO MM (VSX-45TX).....20 Hz to 20,000 Hz ± 0.3 dB
VCR 1/DVR, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, CD-R/TAPE 1, MD/TAPE 2.....5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Output (Level/Impedance)
VCR 1/DVR REC, VCR 2 REC, CD-R/TAPE 1, MD/TAPE 2 REC.....335 mV/2.2 kΩ

Tone Control
BASS..... ± 6 dB (100 Hz)
TREBLE..... ± 6 dB (10 kHz)
LOUDNESS.....+4/+2 dB (100Hz/10 kHz) (at volume position -40dB)

Signal-to-Noise Ratio (IHF, short circuited, A network)
VCR 1/DVR, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, CD-R/TAPE 1, MD/TAPE 2, MULTI CH IN.....101 dB

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
VCR 1/DVR, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, CD-R/TAPE 1, MD/TAPE 2.....83 dB

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.
** Measured by Audio Spectrum Analyzer.

VIDEO Section (S jack)

Input (Sensitivity/Impedance)
VCR 1/DVR, VCR 2, VIDEO, DVD/LD, TV/SAT
Luminance signal (Y).....1 Vp-p/75 Ω
Chrominance signal (C).....0.286 Vp-p/75 Ω

Output (Level/Impedance)
VCR 1/DVR, VCR 2, MONITOR OUT
Luminance signal (Y).....1 Vp-p/75 Ω
Chrominance signal (C).....0.286 Vp-p/75 Ω

Frequency Response
VCR 1/DVR, VCR 2, VIDEO, DVD/LD, TV/SAT
Luminance signal (Y).....5 Hz to 10 MHz $^{+0}_{-3}$dB

Signal-to-Noise Ratio
Luminance signal (Y).....65 dB

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"DTS", "DTS-ES Extended Surround" and "Neo:6" are trademarks of Digital Theater Systems, Inc.

Component Video Section

Input (Sensitivity)
Y.....1 Vp-p/75 Ω
PB/PR.....0.7 V/75 Ω

Output (Level/Impedance)
Y.....1 Vp-p/75 Ω
PB/PR.....0.7 V/75 Ω

Frequency Response
Y.....5 Hz to 40 MHz $^{+0}_{-3}$ dB
PB/PR.....5 Hz to 40 MHz $^{+0}_{-3}$ dB

VIDEO Section (Composite)

Input (Sensitivity/Impedance)
VCR 1/DVR, VCR 2, VIDEO, DVD/LD, TV/SAT.....1 Vp-p/75 Ω

Output (Level/Impedance)
VCR 1/DVR, VCR 2, MONITOR OUT, MONITOR OUT2.....1 Vp-p/75 Ω

Frequency Response
VCR 1/DVR, VCR 2, TV/SAT, DVD/LD
VIDEO→MONITOR OUT,.....5 Hz to 10 MHz $^{+0}_{-3}$dB

Signal-to-Noise Ratio.....65 dB

FM Tuner Section

Frequency Range.....87.5 MHz to 108 MHz
Usable Sensitivity.....Mono: 13.2 dBf, IHF (1.3 μV/75 Ω)
50 dB Quieting Sensitivity.....Mono: 20.2 dBf
Stereo: 38.6 dBf
Signal-to-Noise Ratio.....Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion.....Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity.....60 dB (400 kHz)
Stereo Separation.....40 dB (1 kHz)
Frequency Response.....30 Hz to 15 kHz (± 1) dB
Antenna Input.....75 Ω unbalanced

AM Tuner Section

Frequency Range.....530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna).....350 μV/m
Selectivity.....25 dB
Signal-to-Noise Ratio.....50 dB
Antenna.....Loop antenna

Miscellaneous

Power Requirements.....AC 120 V, 60 Hz
Power Consumption.....600 W
Power Consumption in Standby mode (VSX-45TX).....0.8 W
Power Consumption in Standby mode (VSX-43TX).....0.6 W
AC Outlet SWITCHED.....100 W (0.8 A) MAX
Dimensions.....420 (W) × 188 (H) × 464 (D) mm
(16-9/16 (W) × 7-7/16 (H) × 18-5/16 (D) in.)
Weight (without package) (VSX-45TX)...18.8 kg (41 lb 8 oz)
Weight (without package) (VSX-43TX)...17.3 kg (38 lb 3 oz)

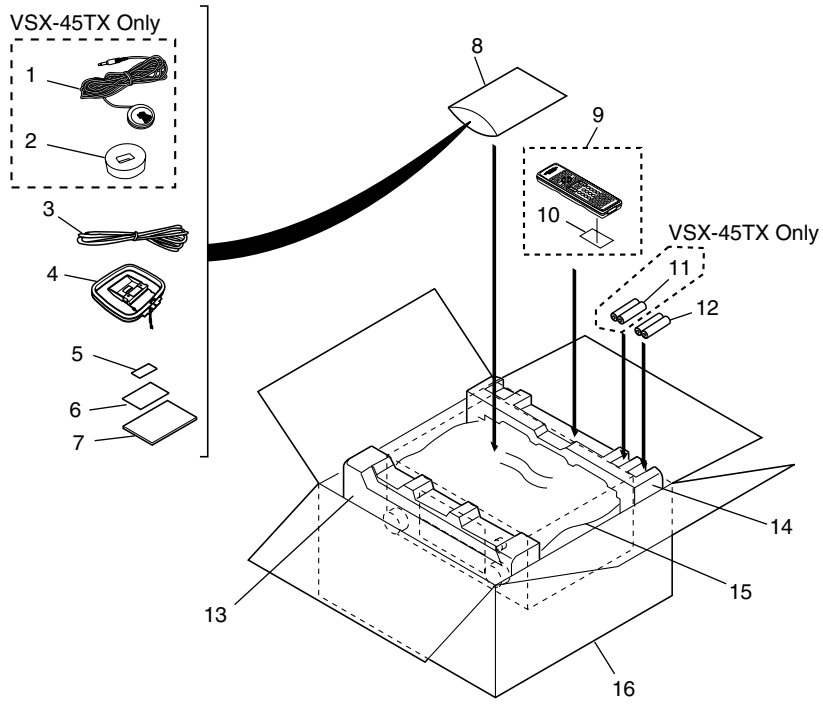
Furnished Parts

FM wire Antenna.....1
AM loop Antenna.....1
"AA" IEC LR6 batteries.....4
Remote Control Unit 1
Microphone for Auto Surround Sound Setup.....1
Microphone Stand for Auto Surround Sound Setup.....1
Operating Instructions.....1

2. EXPLODED VIEWS AND PARTS LIST

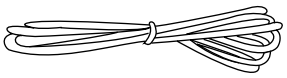
NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING

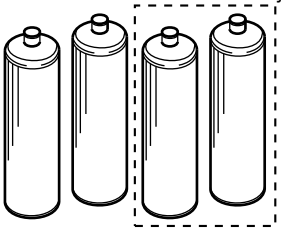


● Accessories

AM Loop Antenna
(ATB7009)

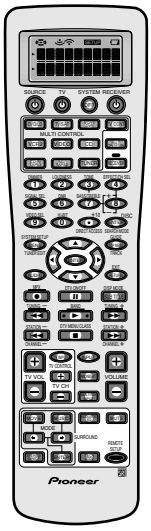


FM Wire Antenna
(ADH7004)



Dry Cell Battery
(LR6, AA)

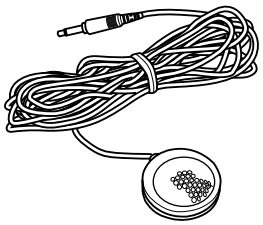
Operating Instructions
(VSX-45TX : ARB7257)
(VSX-43TX : ARB7261)



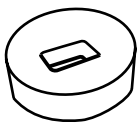
Remote Control Unit
(VSX-45TX : AXD7325)

Remote Control Unit
(VSX-43TX : AXD7328)

VSX-45TX Only



Microphone for Auto
Surround Sound Setup
(APM7004)



Microphone Stand for Auto
Surround Sound Setup
(AEB7269)

PACKING parts List

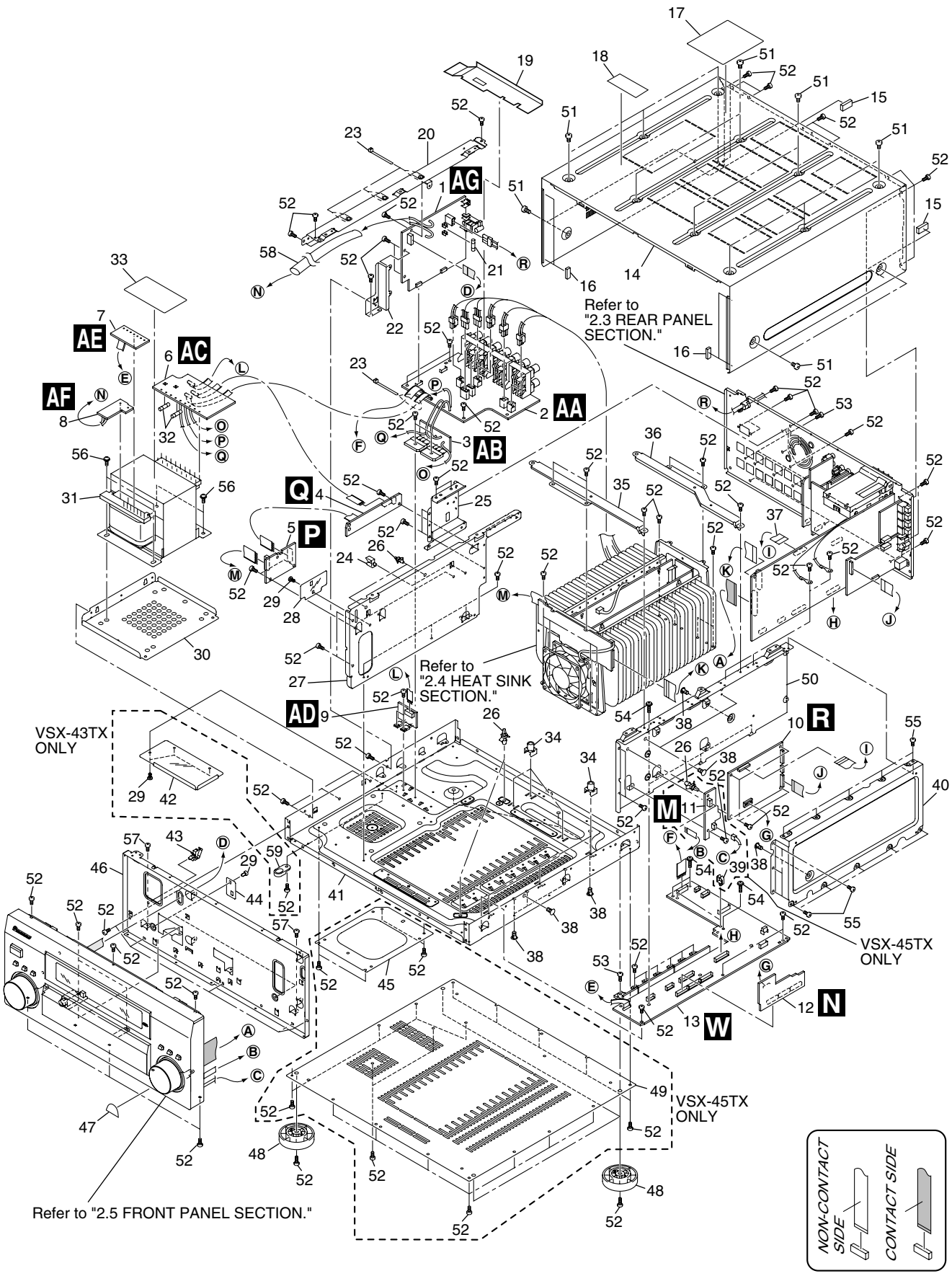
Mark	No.	Description	Part No.
	1	MIC Assy	See Contrast table (2)
	2	MIC Stand 45	See Contrast table (2)
	3	FM Wire Antenna	ADH7004
	4	AM Loop Antenna	ATB7009
	5	Caution Sheet SP,E	ARM7056
NSP	6	Warranty Card EL	ARY7007
	7	Operating Instructions (English)	See Contrast table (2)
NSP	8	Polyetylene Bag (0.03*230*340)	Z21-038
	9	Remote Control Unit	See Contrast table (2)
	10	Battery Cover	See Contrast table (2)
NSP	11	Alkaline Dry Cell Battery (LR6, AA)	See Contrast table (2)
NSP	12	Alkaline Dry Cell Battery (LR6, AA)	VEM1021
	13	Front Pad 45	AHA7374
	14	Rear Pad 45	AHA7375
	15	Packing Sheet	RHC1023
	16	Packing Case	See Contrast table (2)

(2) CONTRAST TABLE

VSX-45TX/KUXJI/CA and VSX-43TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-45TX/KUXJI/CA	VSX-43TX/KUXJI/CA
	1	MIC Assy	APM7004	Not used
	2	MIC Stand 45	AEB7269	Not used
	7	Operating Instructions (English)	ARB7257	ARB7261
	9	Remote Control Unit 45/KU	AXD7325	Not used
	9	Remote Control Unit 43/KU	Not used	AXD7328
	10	Battery Cover	AZN7896	AZN7424
NSP	11	Alkaline Dry Cell Battery (LR6, AA)	VEM1021	Not used
	16	Packing Case 45KU	AHD8060	Not used
	16	Packing Case 43KU	Not used	AHD8061

2.2 EXTERIOR SECTION



EXTERIOR SECTION parts List

Mark	No.	Description	Part No.
	1	PRIMARY Assy	AWX7968
	2	SP/PS Assy	See Contrast table (2)
	3	DIODE Assy	See Contrast table (2)
	4	FAN CONNECTION Assy	AWX8005
	5	FAN DRIVE Assy	AWX7976
	6	TRANS 2-1 Assy	AWX7979
	7	TRANS 2-2 Assy	AWX7970
	8	TRANS 1 Assy	AWX7969
	9	VH TR Assy	AWX8018
	10	DSP ASSY	AWX8016
	11	MIC AMP Assy	See Contrast table (2)
	12	DSP CONNECTION Assy	AWX8024
	13	REGULATOR Assy	AWX7967
	14	Bonnet Case 45B	AZN7897
	15	Spacer 45A	AEB7263
	16	Spacer 45B	AEB7264
	17	Label (DD/DTS/THX)	ARW7177
	18	Label (FCC/DOC)	ARW7191
	19	Barrier 45	AEC7444
	20	Left Beam 45	ANG7401
⚠	21	FU1 Fuse (10A)	VEK1029
	22	Primary Angle 35	ANG7301
NSP	23	Binder	ZCA-BK1
NSP	24	Mini Clamp	VEC1597
	25	Fan Box 45	ANG7413
	26	Locking Card Spacer	PNW2917
	27	Trans Shield 45	ANG7400
	28	Styling Sheet B	AEC7437
	29	Push Rivet	AEC7370
	30	Trans Frame 45	ANG7399

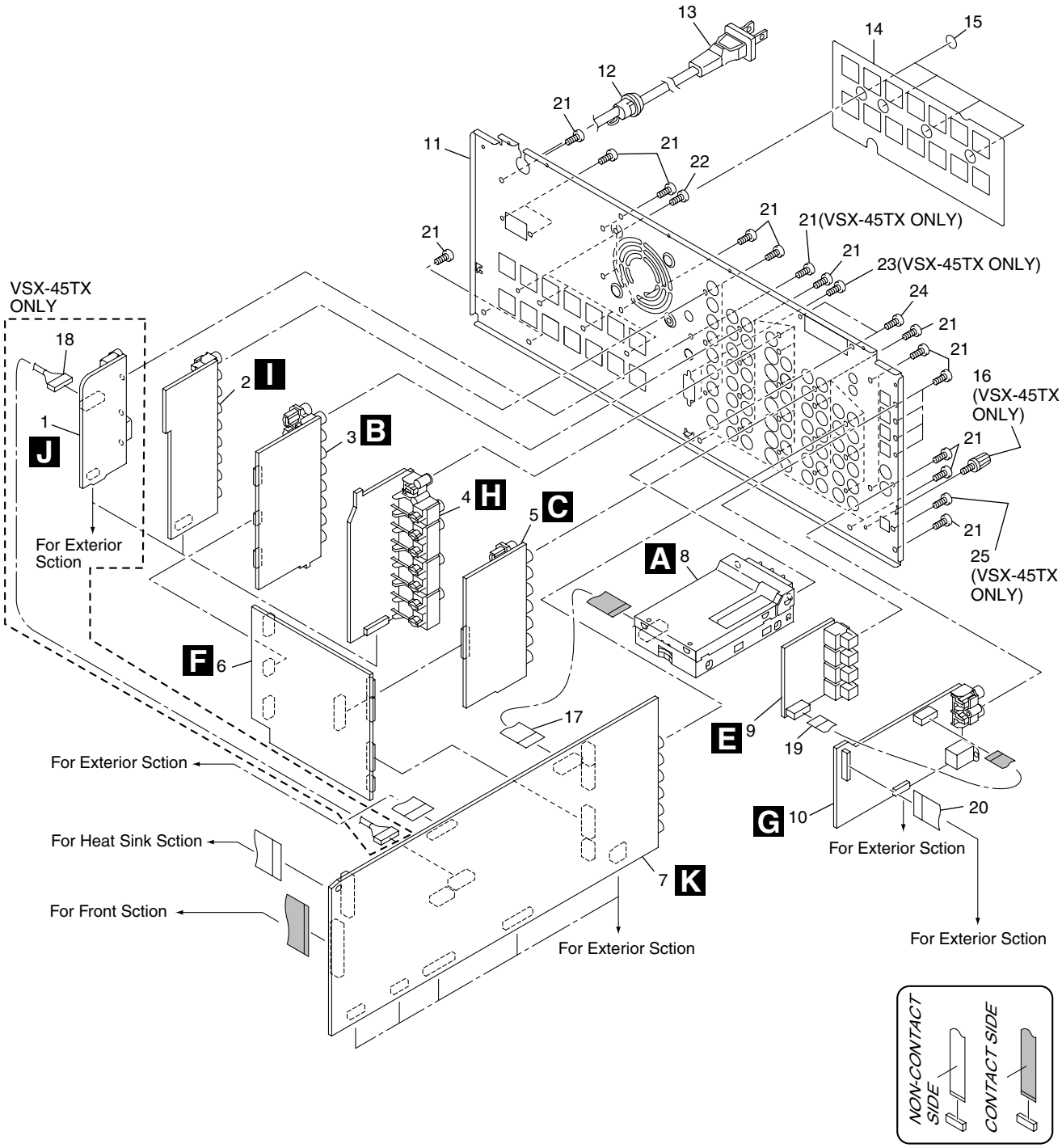
Mark	No.	Description	Part No.
⚠	31	T1 Power Transformer	ATS7328
⚠	32	FU4,FU5 Fuse (3A)	REK1113
NSP	33	Trans Label 45	AAX7957
	34	PCB Mold	AMR2534
	35	Bridge Frame 45F	ANG7409
	36	Bridge Frame 45R	ANG7410
	37	J7 21P FFC/60V	ADD7355
	38	Card Spacer	DNK2769
NSP	39	Wire Clip (A)	See Contrast table (2)
	40	DSP Shield 45B	ANG7403
NSP	41	Under Base	See Contrast table (2)
	42	Screw Cover 45A	See Contrast table (2)
NSP	43	Wire Saddle	DEC1450
	44	Styling Sheet	AEC7413
	45	Stabilizer 45	See Contrast table (2)
NSP	46	Panel Stay 45	AND7047
NSP	47	Energy Star Label	AAX7876
	48	Insulator	PNW2766
	49	Bottom Plate 45	See Contrast table (2)
	50	DSP Shield 45A	ANG7402
	51	Screw	BBZ40P080FZK
	52	Screw	BBZ30P080FZK
	53	Screw	BBZ30P100FCC
	54	Screw	IBZ30P150FCC
	55	Screw	BBT30P080FCC
	56	Screw	ABA7066
	57	Screw	ABA7009
	58	UL Tube	ADN7007
	59	Screw Cover	
		See "2.5 FRONT PANEL SECTION" No. 19-3	

(2) CONTRAST TABLE

VSX-45TX/KUXJI/CA and VSX-43TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-45TX/KUXJI/CA	VSX-43TX/KUXJI/CA
	2	SP/PS Assy	AWX7975	AWX8037
	3	DIODE Assy	AWX8017	AWX8038
	11	MIC AMP Assy	AWX8004	Not used
NSP	39	Wire Clip (A)	VEC1355	Not used
NSP	41	Under Base 45	ANA7138	Not used
NSP	41	Under Base 43	Not used	ANA7144
	42	Screw Cover 45A	Not used	AEC7414
	45	Stabilizer 45	ANG7408	Not used
	49	Bottom Plate 45	ANF7031	Not used

2.3 REAR PANEL SECTION



REAR PANEL SECTION parts List

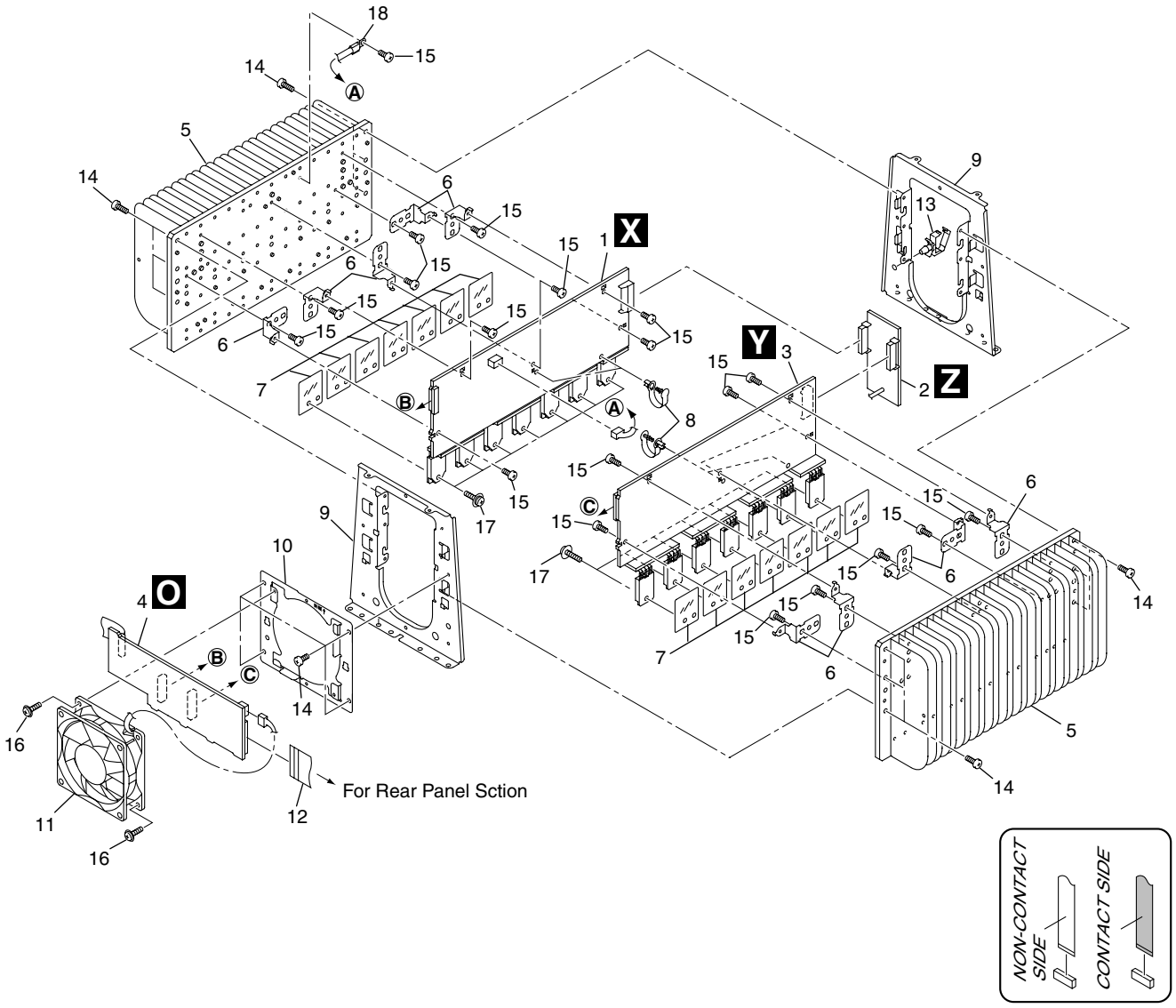
Mark	No.	Description	Part No.
	1	RS232C Assy	See Contrast table (2)
	2	COMPONENT Assy	See Contrast table (2)
	3	7.1CH I/O Assy	AWX7973
	4	VIDEO Assy	See Contrast table (2)
	5	V-AUDIO IN Assy	See Contrast table (2)
	6	INPUT CONNECT Assy	See Contrast table (2)
	7	MAIN CONTROL Assy	See Contrast table (2)
	8	FM/AM TUNER Module	AXQ7231
	9	OPTICAL IN Assy	AWX7978
	10	COAXIAL IN Assy	See Contrast table (2)
	11	Rear Panel	See Contrast table (2)
	12	Cord Stopper	CM-22C
⚠	13	AC Power Cord	VDG1075
	14	Speaker Sheet	AAK8016
	15	Cushion Circle 16B	AED7052
	16	Screw with Terminal	See Contrast table (2)
	17	J8 13P FFC/60V	ADD7356
	18	J1902 Connector Assy (8P)	See Contrast table (2)
	19	J5 9P FFC/60V	ADD7353
	20	J6 20P FFC/60V	ADD7354
	21	Screw	BBZ30P080FZK
	22	Screw	BBZ30P100FCC
	23	Screw	See Contrast table (2)
	24	Screw	VPZ30P080FZK
	25	Screw	See Contrast table (2)

(2) CONTRAST TABLE

VSX-45TX/KUXJI/CA and VSX-43TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-45TX/KUXJI/CA	VSX-43TX/KUXJI/CA
	1	RS232C Assy	AWX7966	Not used
	2	COMPONENT Assy	AWX7963	AWX8021
	4	VIDEO Assy	AWX7962	AWX8002
	5	V-AUDIO IN Assy	AWX7964	AWX7991
	6	INPUT CONNECT Assy	AWX7974	AWX8041
	7	MAIN CONTROL Assy	AWX7961	AWX8000
	10	COAXIAL IN Assy	AWX7965	AWX8013
	11	Rear Panel 45KU	ANC8063	Not used
	11	Rear Panel 43KU	Not used	ANC8086
	16	Screw with Terminal	AKE-031	Not used
	18	J1902 Connector Assy (8P)	ADE7085	Not used
	23	Screw	ABA7078	Not used
	25	Screw	PMZ30P060FCC	Not used

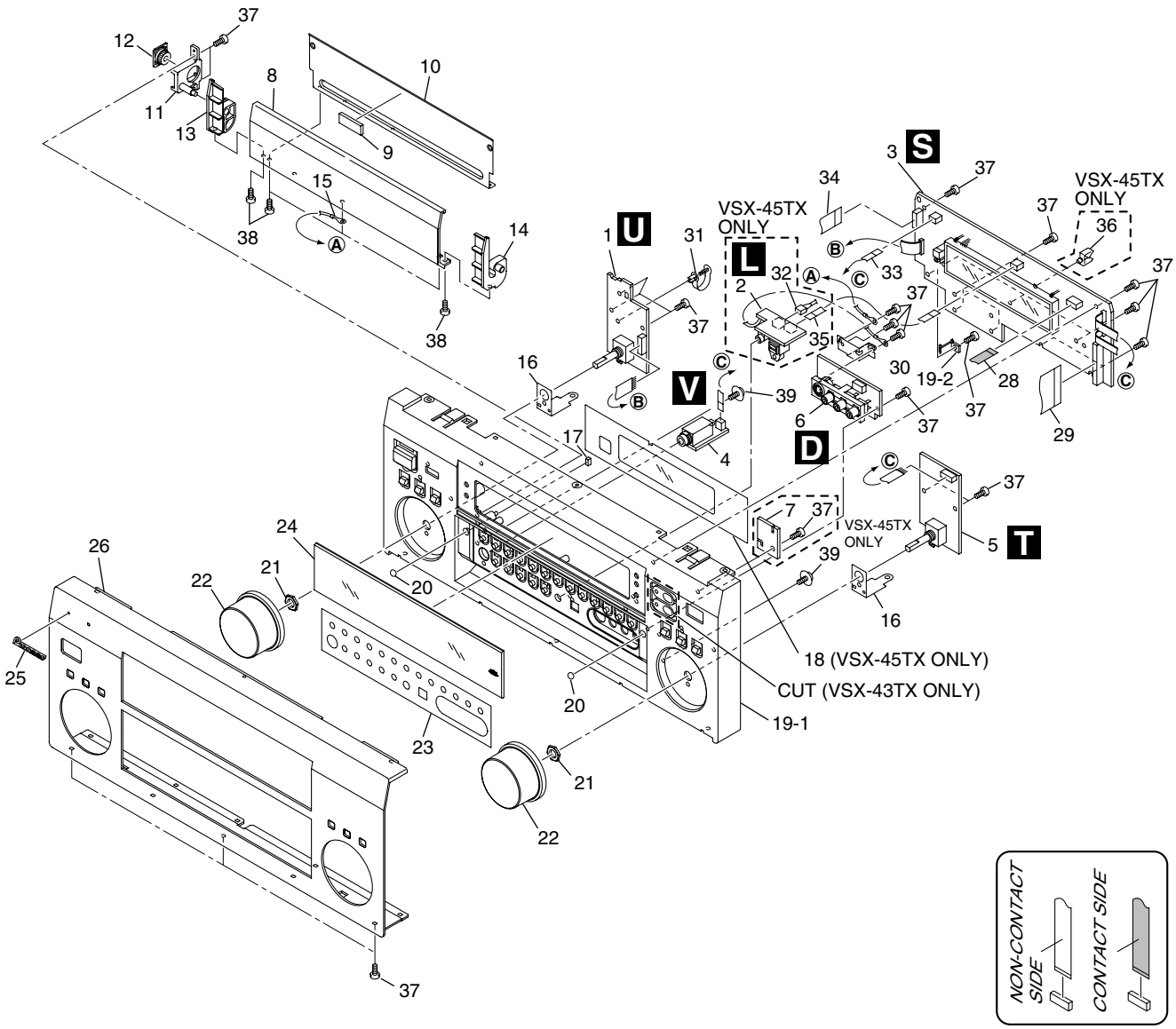
2.4 HEAT SINK SECTION



HEAT SINK SECTION parts List

Mark	No.	Description	Part No.
	1	POWER AMP-L Assy	AWX7984
	2	POWER AMP-C Assy	AWX7986
	3	POWER AMP-R Assy	AWX7985
	4	POWER AMP IN Assy	AWX7982
NSP	5	Heat Sink 45	ANH7152
	6	PCB Angle 45	ANG7406
	7	Mica Sheet 45	AEE7047
NSP	8	Speed Clamp	AEC7445
	9	H.S Angle 45	ANG7404
	10	Fan Holder 80	ANG7407
⚠	11	Fan Motor	AXM7023
	12	J14 24P FFC/60V	ADD7357
NSP	13	Wire Saddle	DEC1450
	14	Screw	BBZ30P100FCC
	15	Screw	BBZ30P080FZK
	16	Screw	BBZ30P300FMC
	17	Screw	ABA7085
⚠	18	TH1 Thermistor	AEX7004

2.5 FRONT PANEL SECTION



FRONT PANEL SECTION parts List

Mark	No.	Description	Part No.
	1	MULTI JOG Assy	AWX7972
	2	MIC & F.OPT IN Assy	See Contrast table (2)
	3	DISPLAY Assy	See Contrast table (2)
	4	HEADPHONE Assy	AWX7980
	5	VOLUME Assy	AWX7971
	6	FRONT IN Assy	AWX7977
	7	STYLING Assy	• • • • •
	8	Door 45	ANB7277
	9	Spacer 45A	AEB7263
	10	Door Stay 45B	AAH7089
	11	Door Shaft 35	AMR7295
	12	Damper Assy (200)	AXA7088
	13	Door Hinge L 45B	AMR7386
	14	Door Hinge R 45B	AMR7387
NSP	15	Earth Lead Wire	ADH7022
	16	Earth Plate B	ANG7412
	17	Magnet 35	AMF7007
	18	FL Sheet 45R	See Contrast table (2)
	19-1	Panel Base 45B	AMB7803
	19-2	Magnet Holder	
	19-3	Screw Cover	
	20	Cushion Circle 6B	AED7044
	21	Nut	NK90FUC
	22	Rotary Knob L BK	AAA7018
	23	D.Sheet	See Contrast table (2)
	24	Window	See Contrast table (2)
	25	Pionner Badge B	PAN1376
	26	F.Panel	See Contrast table (2)
	27	• • • • •	
	28	J4 7P FFC/60V	ADD7352
	29	J1 32P FFC/60V	ADD7349
	30	Earth Plate A	ANG7411
NSP	31	Speed Clamp	AEC7445
	32	J1901 Connector Assy (3P)	See Contrast table (2)
	33	J15 3P FFC/60V	ADD7371
	34	J2 11P FFC/60V	ADD7350
	35	J3 4P FFC/60V	See Contrast table (2)
NSP	36	Wire Clip (A)	See Contrast table (2)
	37	Screw	BPZ30P100FMC
	38	Screw	BBZ30P080FZK
	39	Screw	ABA7009

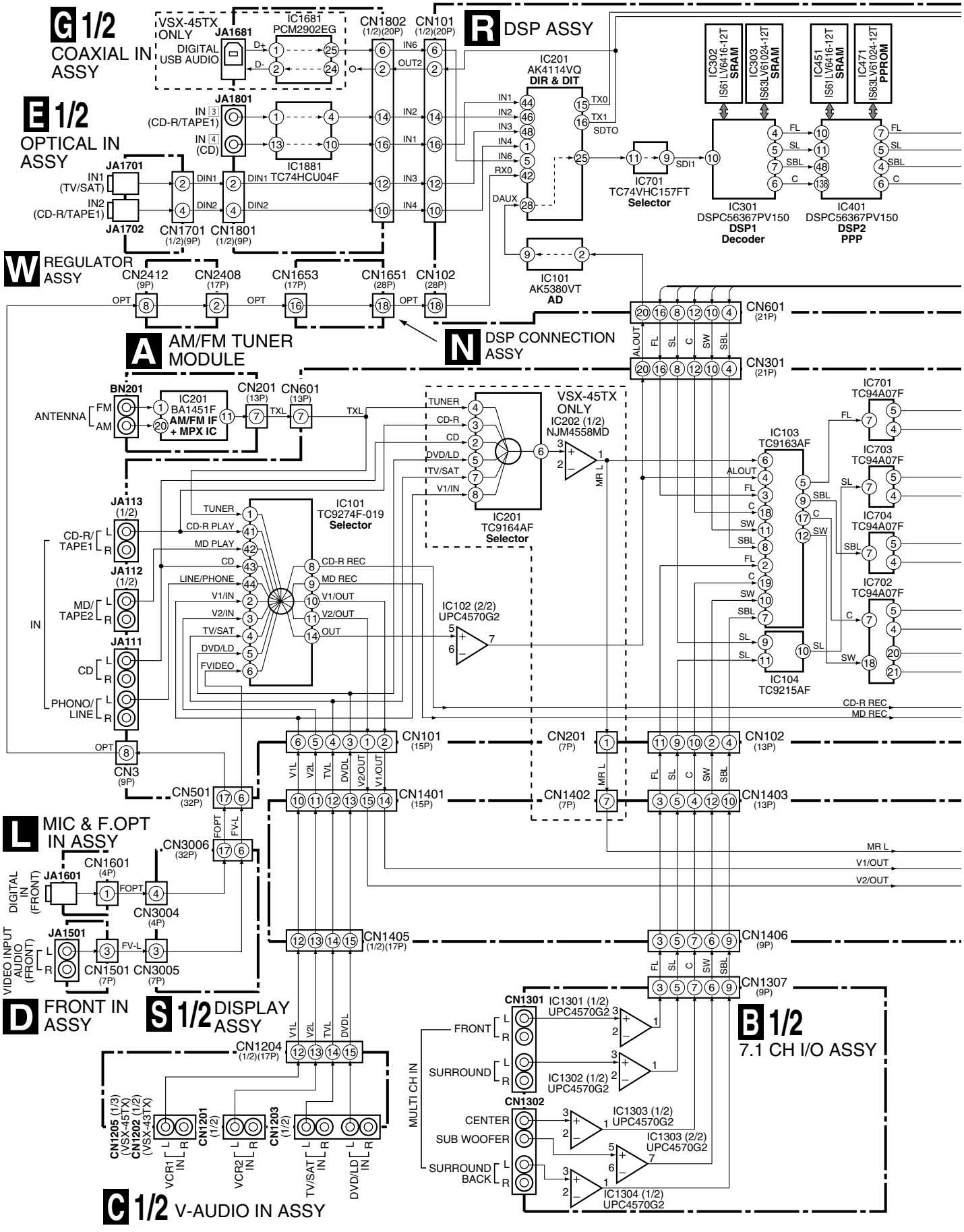
(2) CONTRAST TABLE

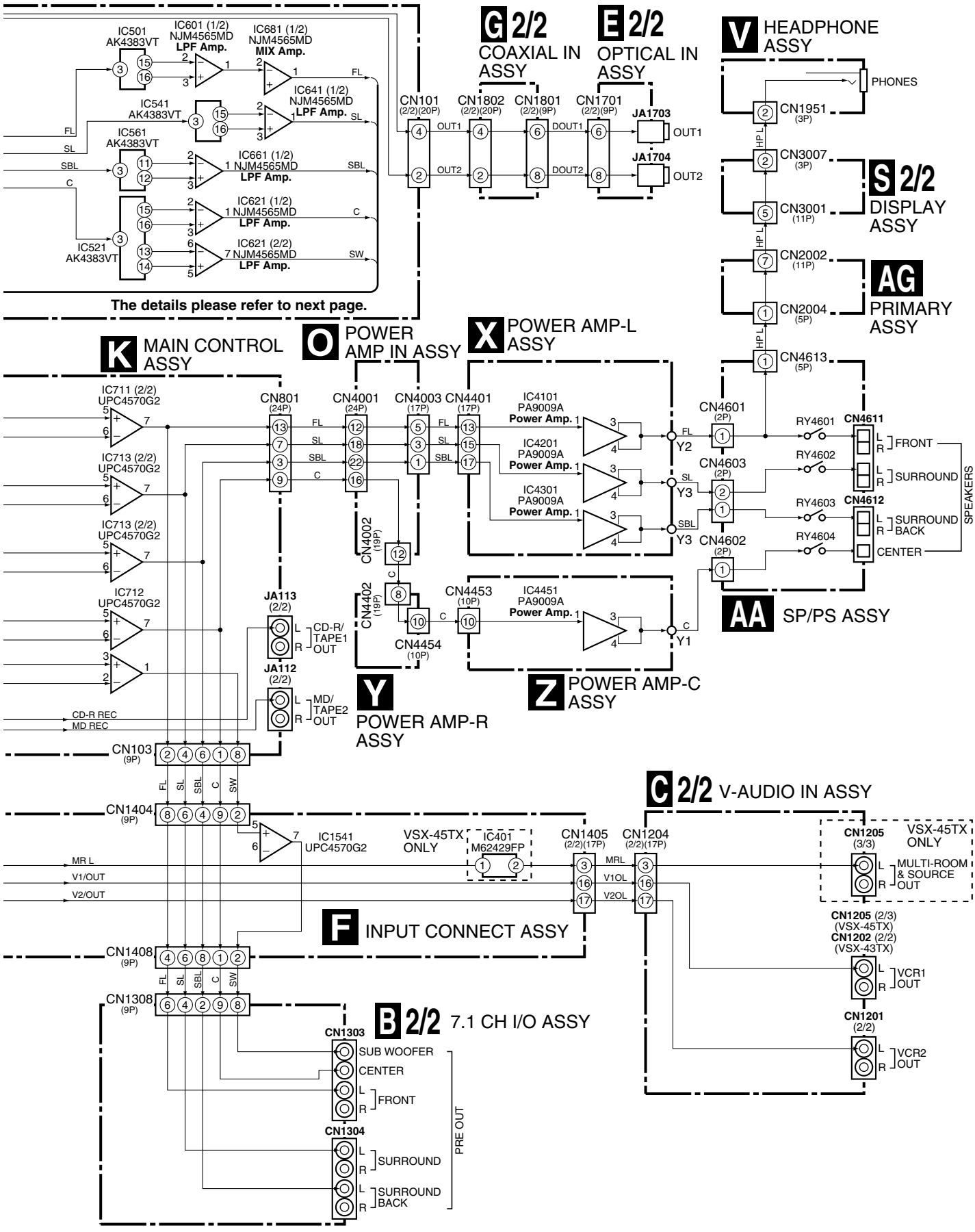
VSX-45TX/KUXJI/CA and VSX-43TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-45TX/KUXJI/CA	VSX-43TX/KUXJI/CA
	2	MIC & F.OPT IN Assy	AWX7981	Not used
	3	DISPLAY Assy	AWX7983	AWX8011
	18	FL Sheet 45R	AAK7957	Not used
	23	D.Sheet 45B	AAK7955	Not used
	23	D.Sheet 43B	Not used	AAK8019
	24	Window 45	AAK7954	Not used
	24	Window 43R	Not used	AAK8072
	26	F.Panel 45BKU	ANB7276	Not used
	26	F.Panel 43BKU	Not used	ANB7278
	32	J1901 Connector Assy (3P)	ADE7084	Not used
	35	J3 4P FFC/60V	ADD7351	Not used
NSP	36	Wire Clip (A)	VEC1355	Not used

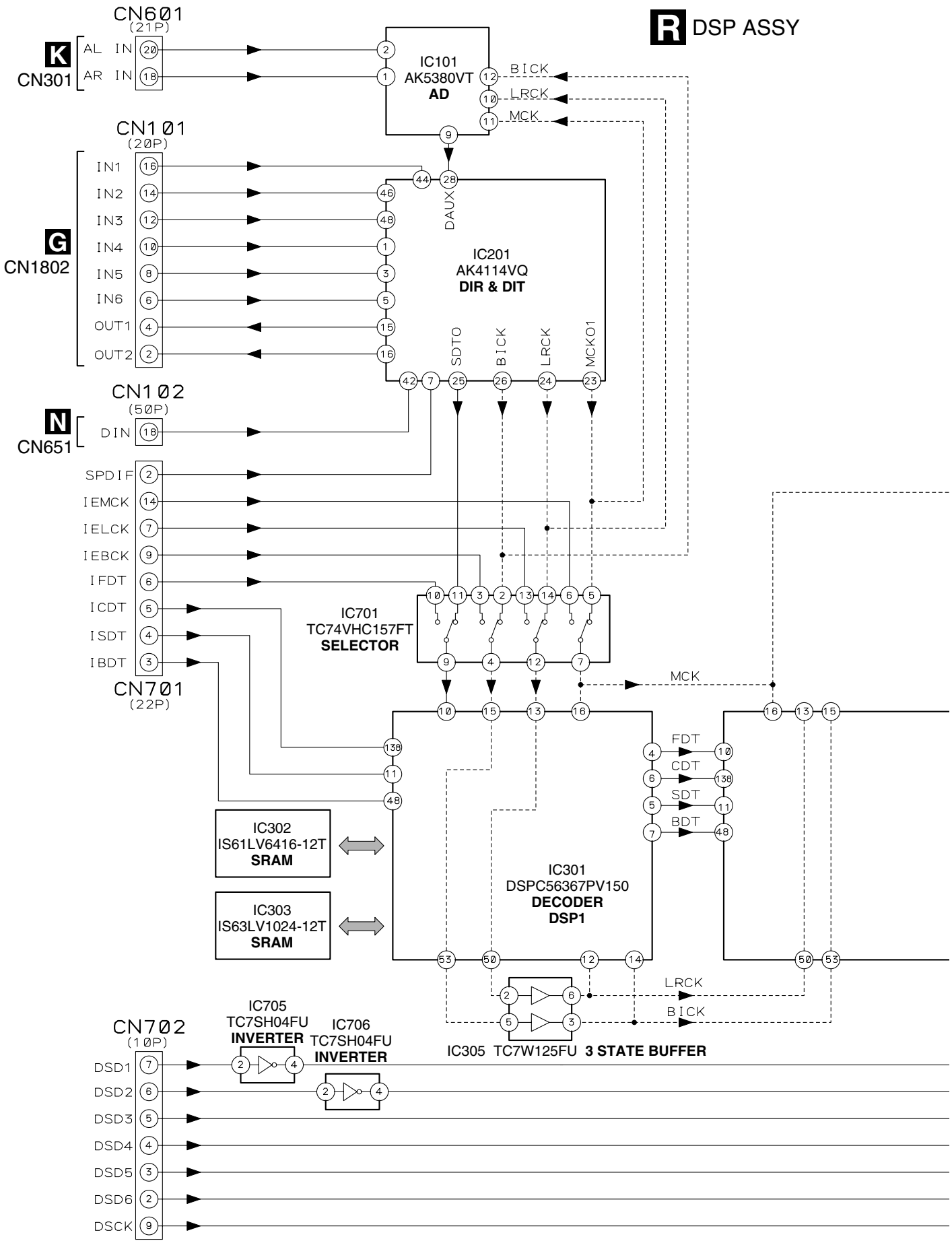
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

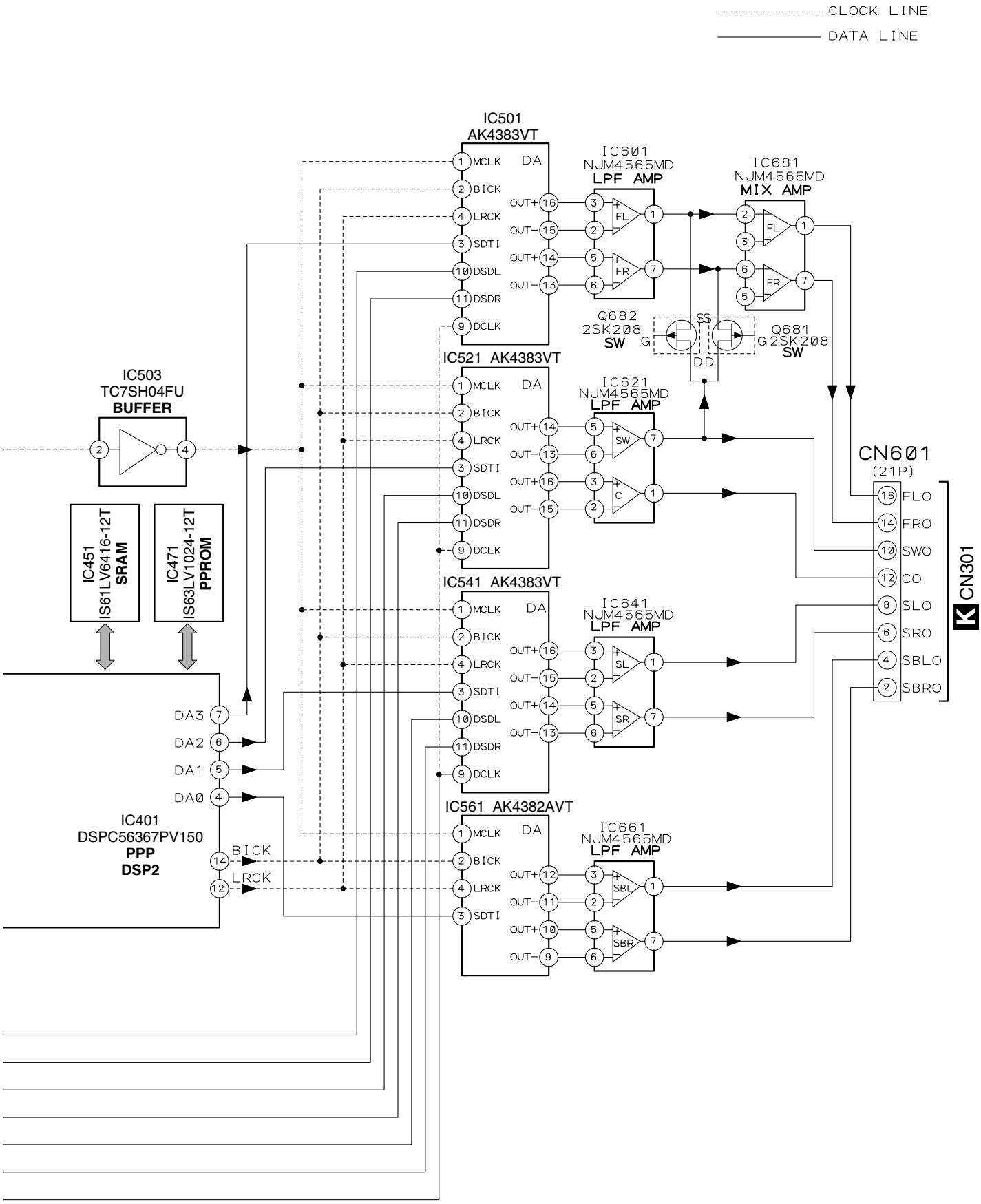
3.1 AUDIO BLOCK DIAGRAM



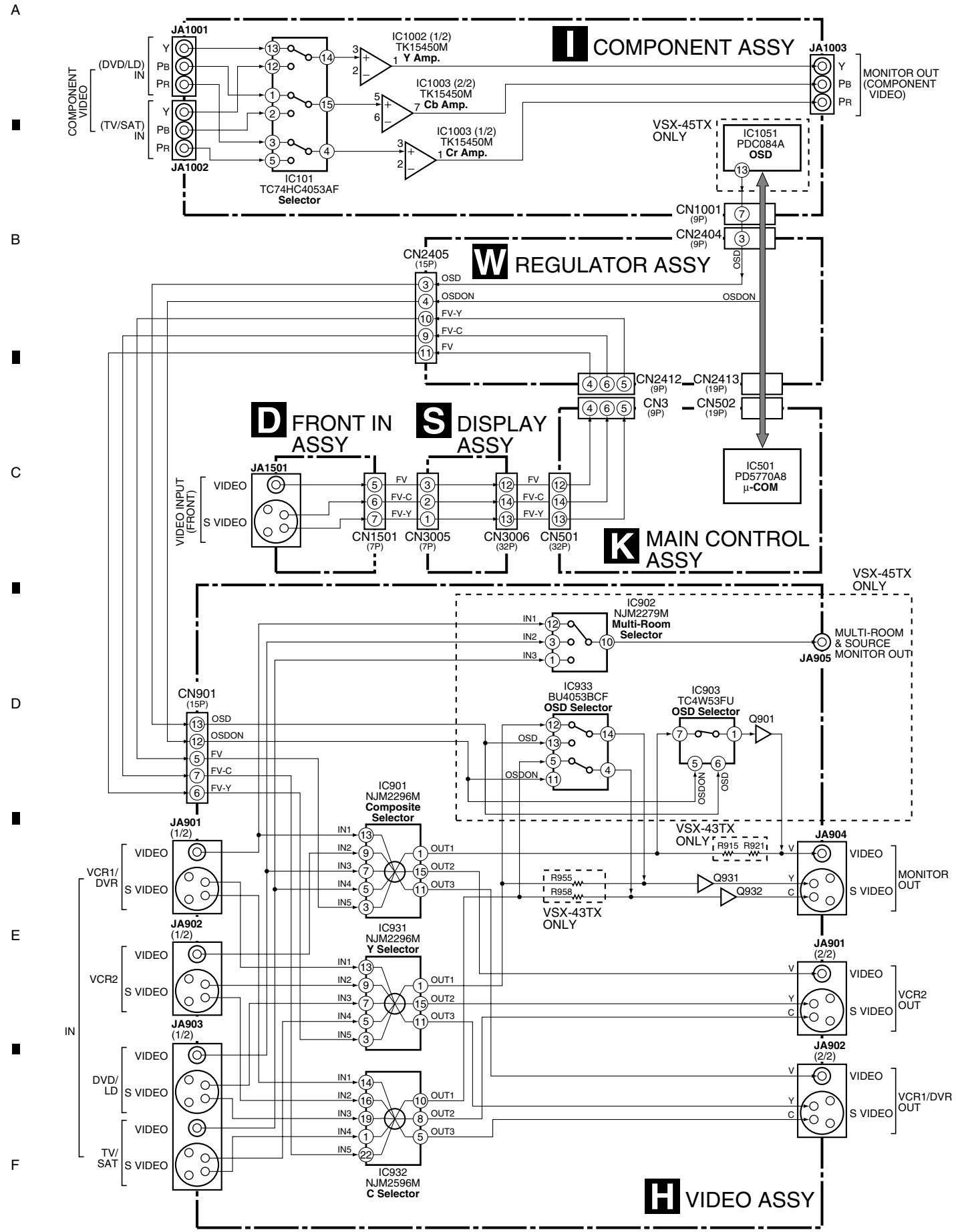

IC501 AK4383VT
IC601 (1/2) NJM4565MD LPF Amp.
IC681 (1/2) NJM4565MD MIX Amp.
IC641 (1/2) NJM4565MD LPF Amp.
IC541 AK4383VT
IC561 AK4383VT
IC661 (1/2) 1 NJM4565MD LPF Amp.
IC621 (1/2) 1 NJM4565MD LPF Amp.
IC521 AK4383VT
IC621 (2/2) 7 NJM4565MD LPF Amp.
FL
SL
SBL
C
SW
The details please refer to next page.
G 2/2 COAXIAL IN ASSY
E 2/2 OPTICAL IN ASSY
V HEADPHONE ASSY
CN101 (2/2)(20P)
CN1802 (2/2)(20P)
CN1801 (2/2)(9P)
CN1701 (2/2)(9P)
JA1703
JA1704
OUT1
OUT2
DOUT1
DOUT2
PHONES
CN1951 (3P)
CN3007 (3P)
CN3001 (11P)
CN2002 (11P)
CN2004 (5P)
CN4613 (5P)
HP L
S 2/2 DISPLAY ASSY
AG PRIMARY ASSY
K MAIN CONTROL ASSY
O POWER AMP IN ASSY
X POWER AMP-L ASSY
IC711 (2/2) UPC4570G2
IC713 (2/2) UPC4570G2
IC712 UPC4570G2
CN801 (24P)
CN4001 (24P)
CN4003 (17P)
CN4401 (17P)
IC4101 PA9009A Power Amp. 1
IC4201 PA9009A Power Amp. 1
IC4301 PA9009A Power Amp. 1
CN4601 (2P)
CN4603 (2P)
CN4602 (2P)
RY4601
RY4602
RY4603
RY4604
CN4611
CN4612
FRONT
SURROUND
SURROUND BACK
CENTER
SPEAKERS
CN4002 (19P)
CN4454 (10P)
CN4453 (10P)
IC4451 PA9009A Power Amp. 1
AA SP/PS ASSY
JA113 (2/2)
JA112 (2/2)
CD-R/ TAPE1 OUT
MD/ TAPE2 OUT
CD-R REC
MD REC
Y POWER AMP-R ASSY
Z POWER AMP-C ASSY
CN103 (9P)
C 2/2 V-AUDIO IN ASSY
CN1404 (9P)
IC1541 UPC4570G2
VSX-45TX ONLY
IC401 M62429FP
CN1405 (2/2)(17P)
CN1204 (2/2)(17P)
CN1205 (3/3)
MULTI-ROOM & SOURCE OUT
MR L
V1/OUT
V2/OUT
MRL
V1OL
V2OL
F INPUT CONNECT ASSY
CN1408 (9P)
CN1308 (9P)
CN1205 (2/3) (VSX-45TX)
CN1202 (2/2) (VSX-43TX)
VCR1 OUT
CN1201 (2/2)
VCR2 OUT
B 2/2 7.1 CH I/O ASSY
CN1303
CN1304
SUB WOOFER
CENTER
FRONT
SURROUND
SURROUND BACK
PRE OUT

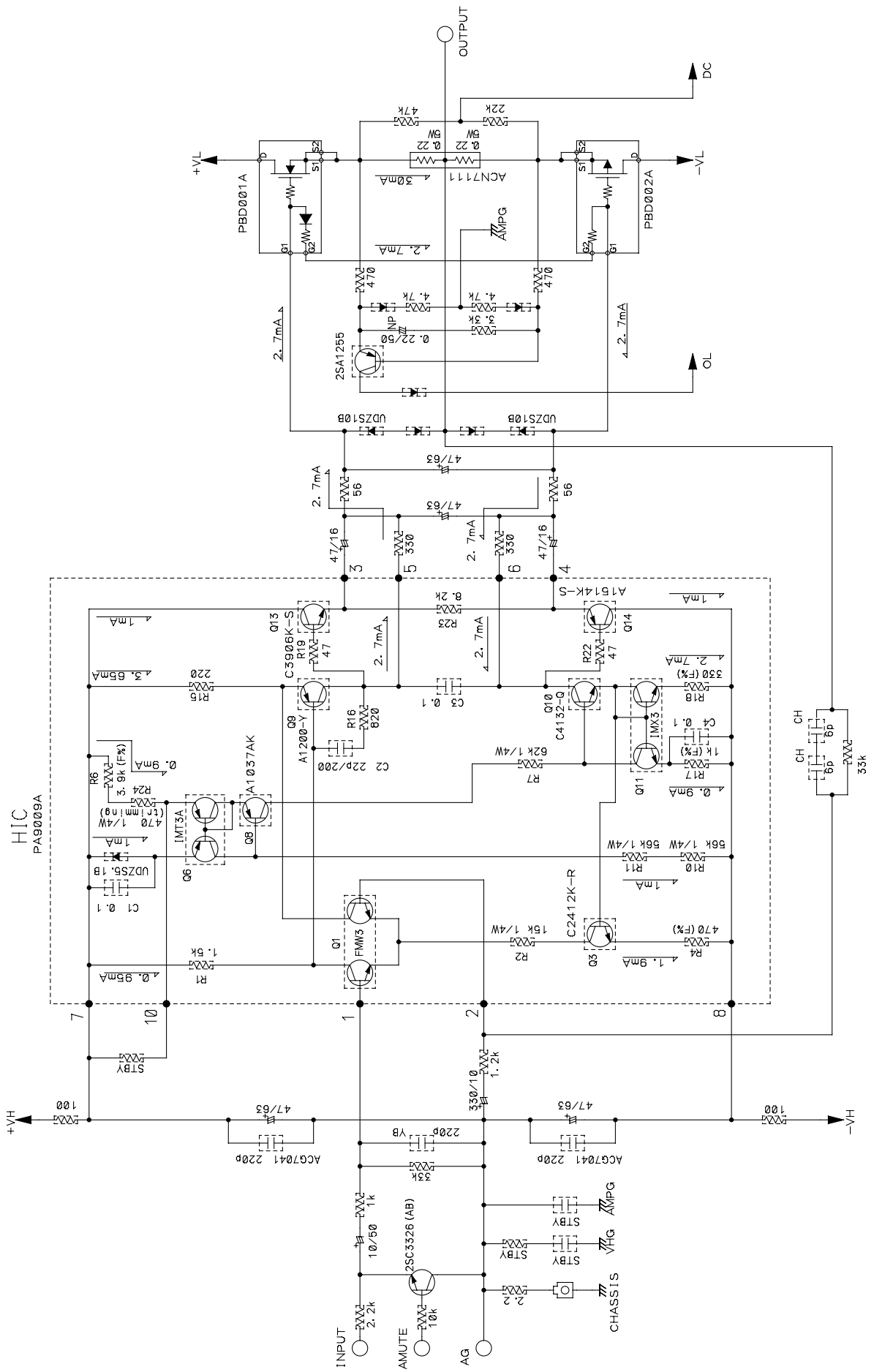
3.2 DSP BLOCK DIAGRAM



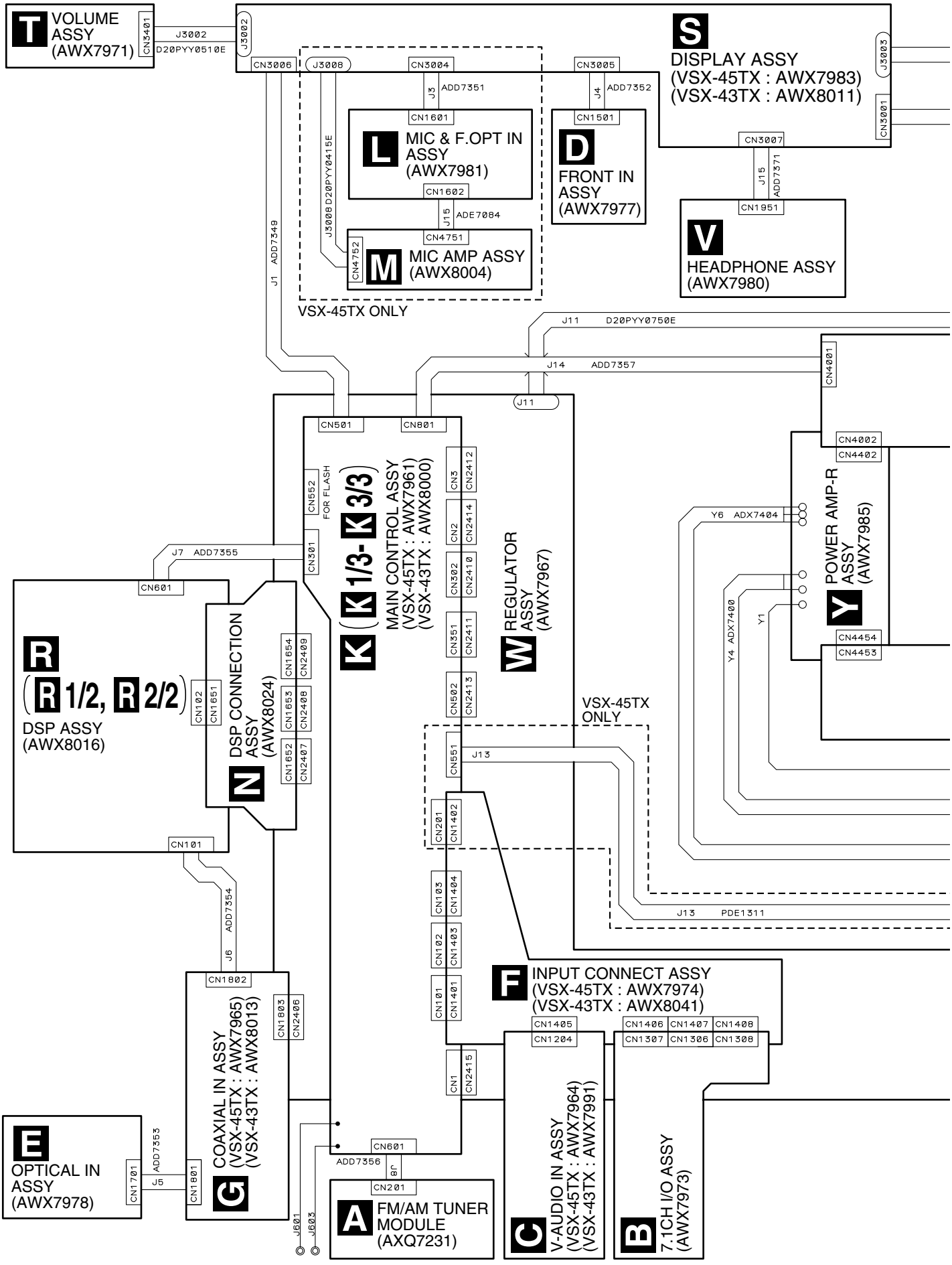

CLOCK LINE
DATA LINE
IC501
AK4383VT
IC601
NJM4565MD
LPF AMP
IC681
NJM4565MD
MIX AMP
Q682
2SK208
SW
Q681
2SK208
SW
IC521 AK4383VT
IC621
NJM4565MD
LPF AMP
IC503
TC7SH04FU
BUFFER
IC451
IS61LV6416-12T
SRAM
IC471
IS63LV1024-12T
PPROM
CN601
(21P)
CN301
FLO
FRO
SWO
CO
SLO
SRO
SBLO
SBRO
IC541 AK4383VT
IC641
NJM4565MD
LPF AMP
IC561 AK4382AVT
IC661
NJM4565MD
LPF AMP
IC401
DSPC56367PV150
PPP
DSP2
DA3
DA2
DA1
DA0
BICK
LRCK
MCLK
BICK
LRCK
SDTI
DSDL
DSDR
DCLK
OUT+
OUT-
FL
FR
SW
C
SL
SR
SBL
SBR

3.3 VIDEO AND POWER AMP BLOCK DIAGRAM

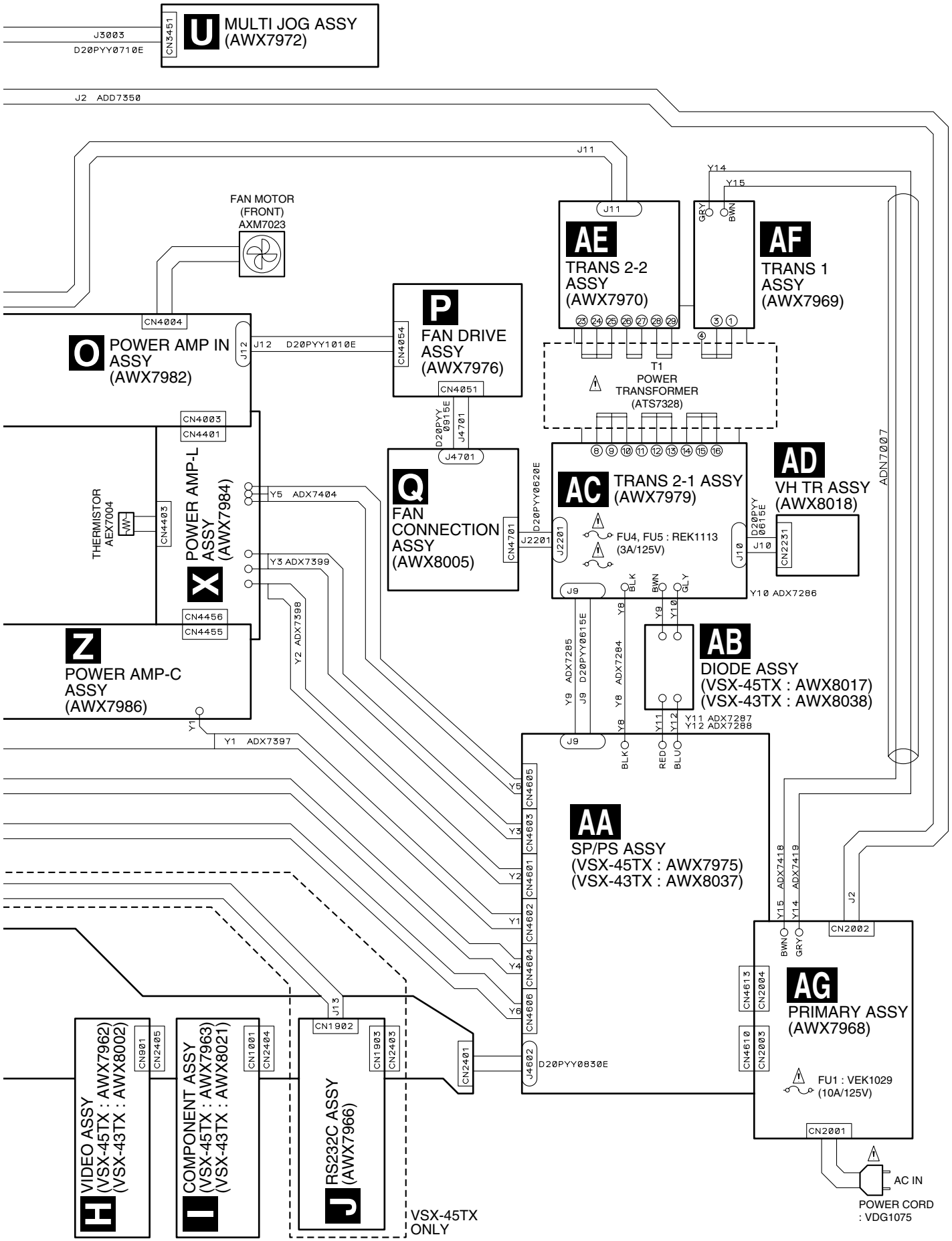



OUTPUT
DC
OL
+VL
-VL
PBD001A
PBD002A
ACN7111
AMPG
2SA1255
UDZS10B
A1514K-S
C3906K-S
A1200-Y
C4132-Q
C2412K-R
FMW3
IMT3A
A1037AK
UDZS5.1B
2SC3326(AB)
HIC
PAG009A
+VH
-VH
STBY
ACG7041 220p
INPUT
AMUTE
AG
CHASSIS

3.4 OVERALL WIRING DIAGRAM

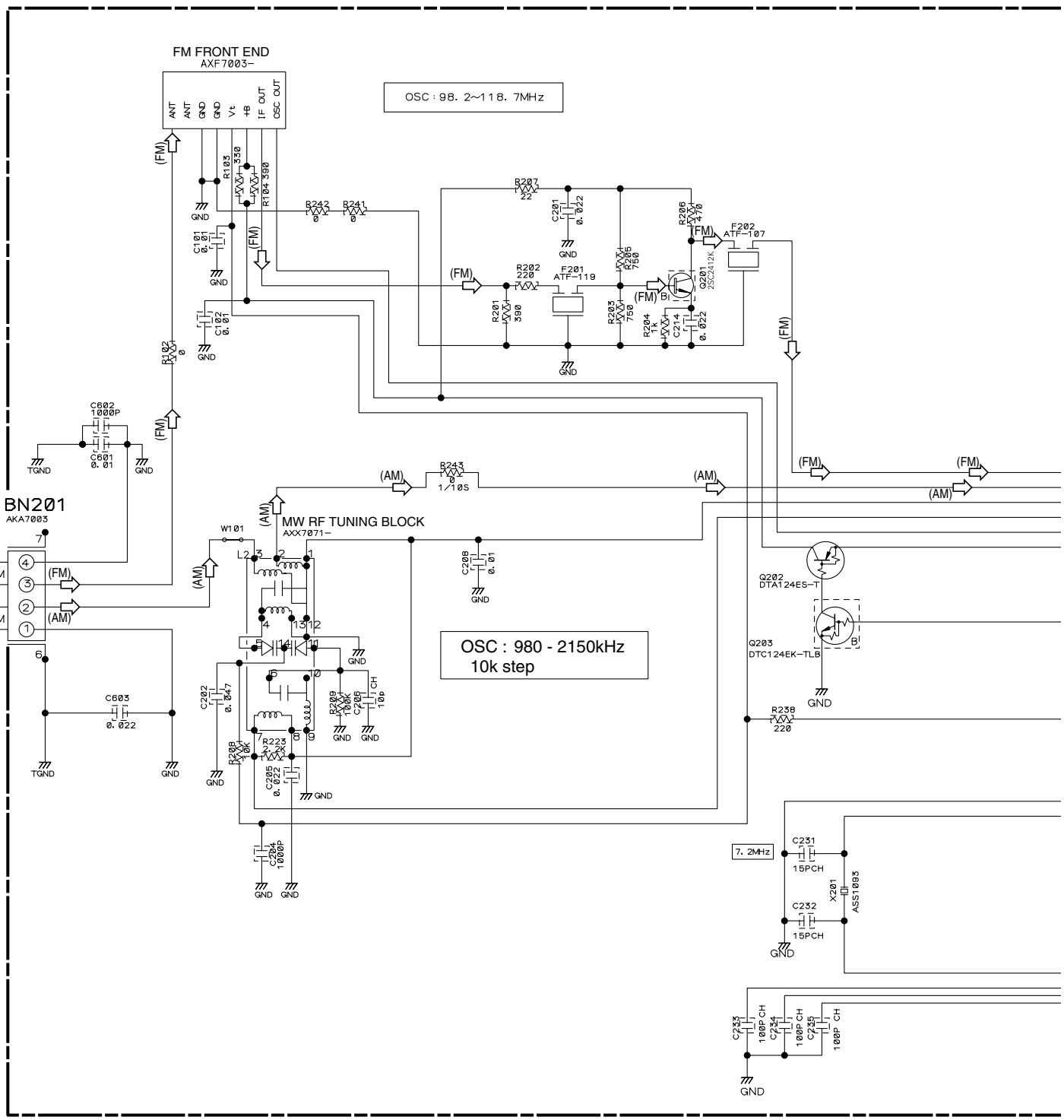


Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



3.5 FM/AM TUNER MODULE

A FM/AM TUNER MODULE (AXQ7231)

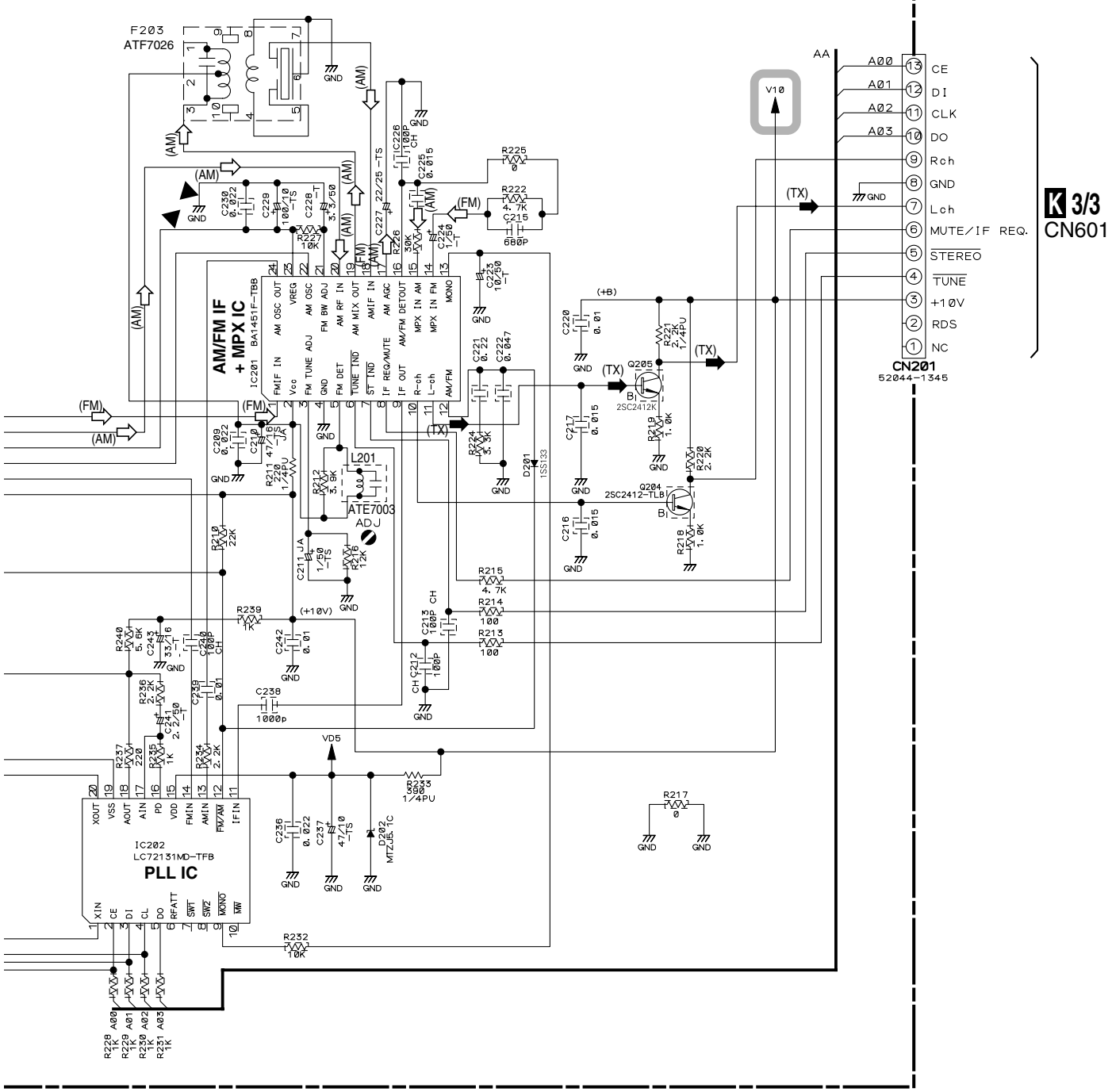


Notes

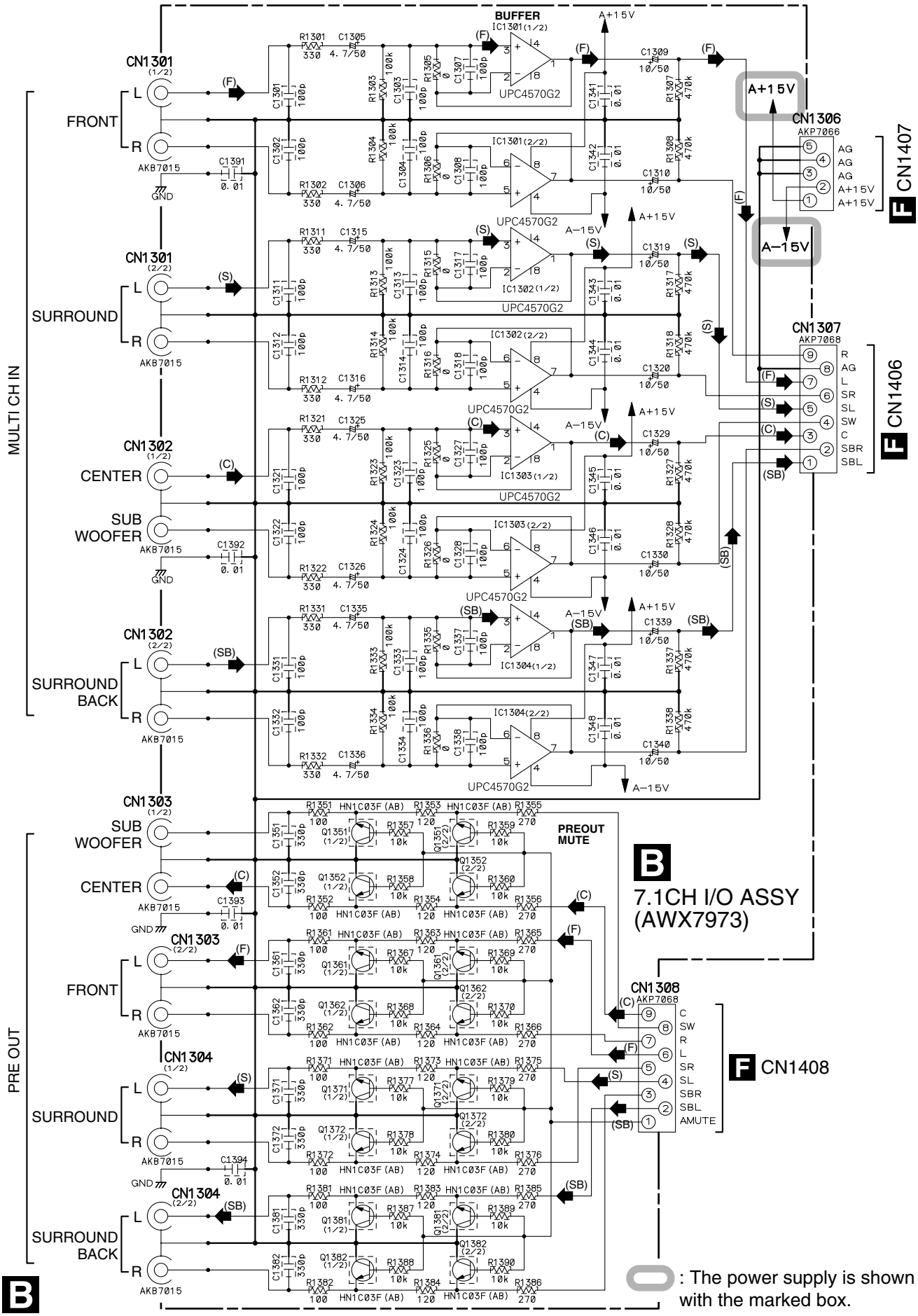
1. RESISTORS
   Indicated in Ω, 1/16W±5% Tolerance unless otherwise noted K:KΩ, M:MΩ.
2. CAPACITORS
   Indicated in Capacity(μF)/VOLTAGE(V) unless otherwise noted P:PF.
3. DIODES
   No mark diode is 1SS133.

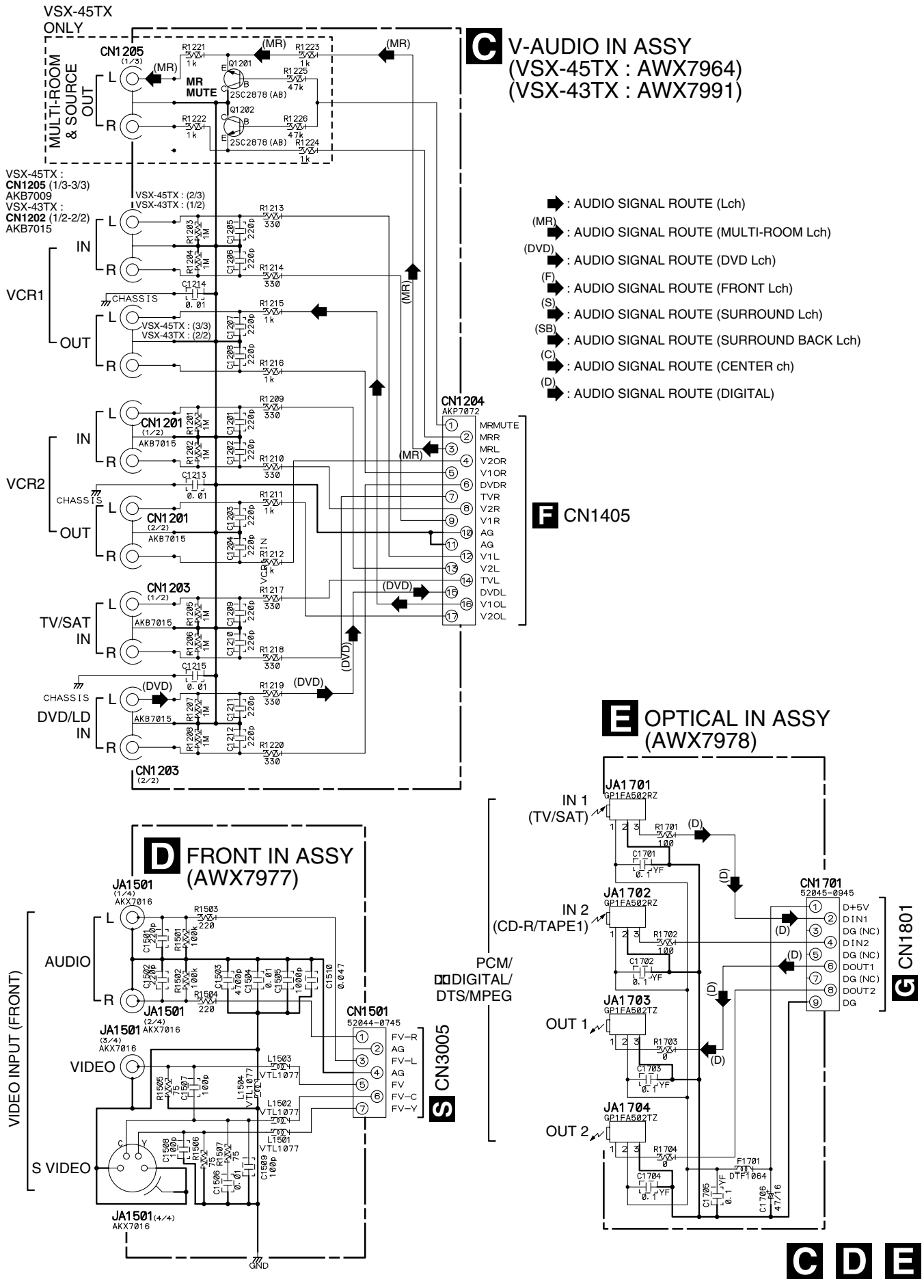
(TX) : AUDIO SIGNAL ROUTE (TUNER Lch)
(AM) : AM SIGNAL ROUTE
(FM) : FM SIGNAL ROUTE

: The power supply is shown with the marked box.

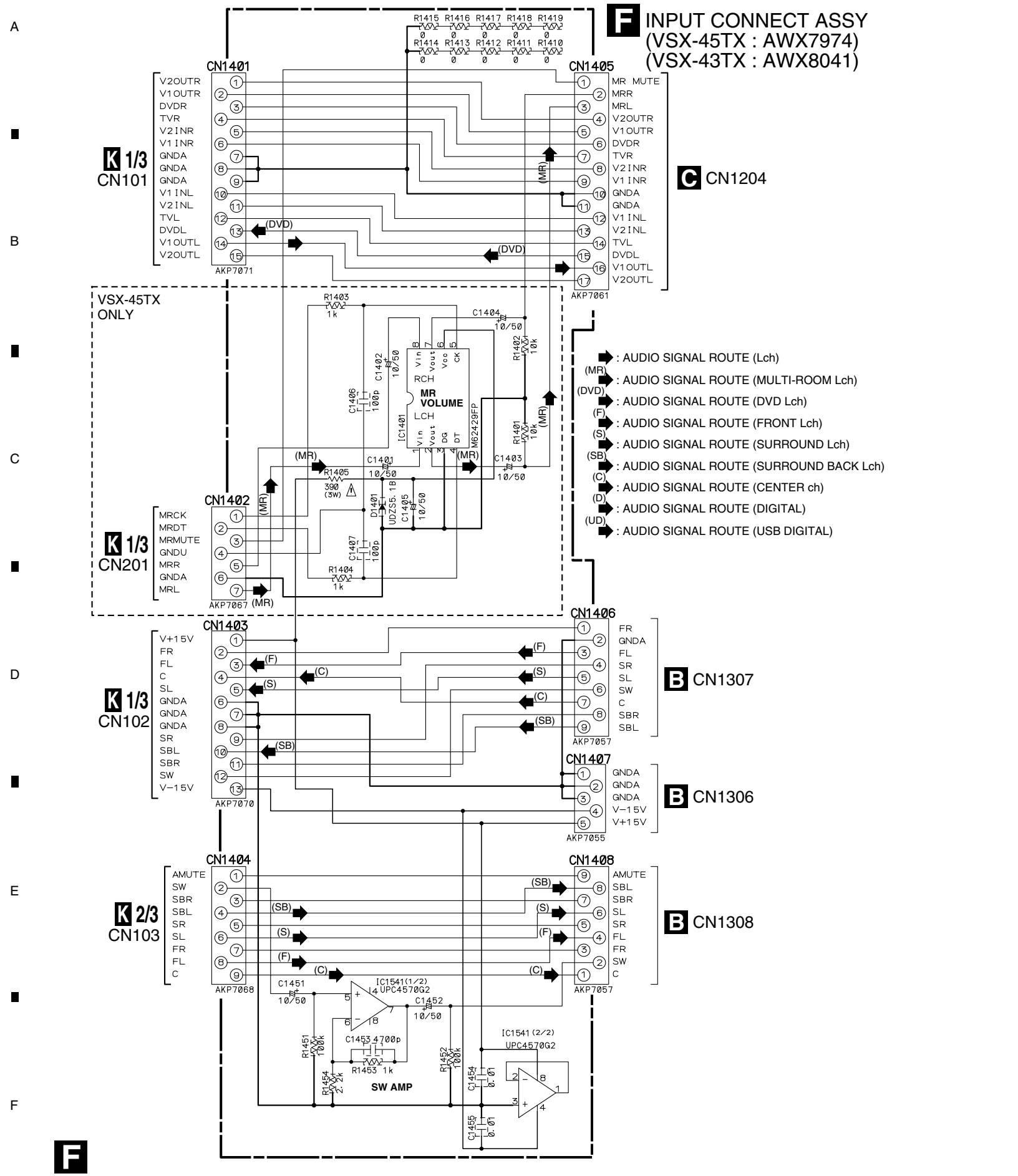


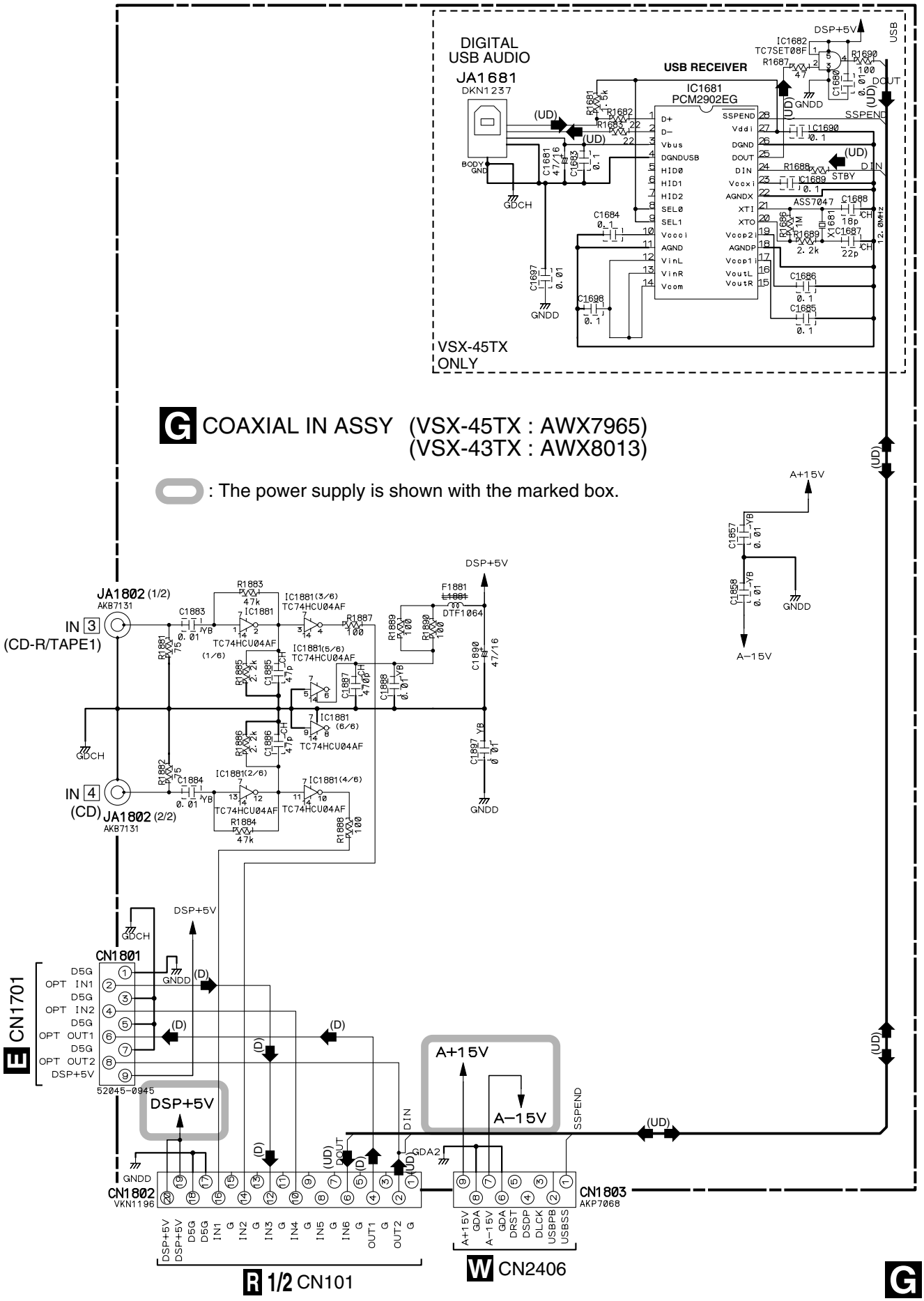
3.6 7.1CH I/O, V-AUDIO IN, FRONT IN and OPTICAL IN ASSYS



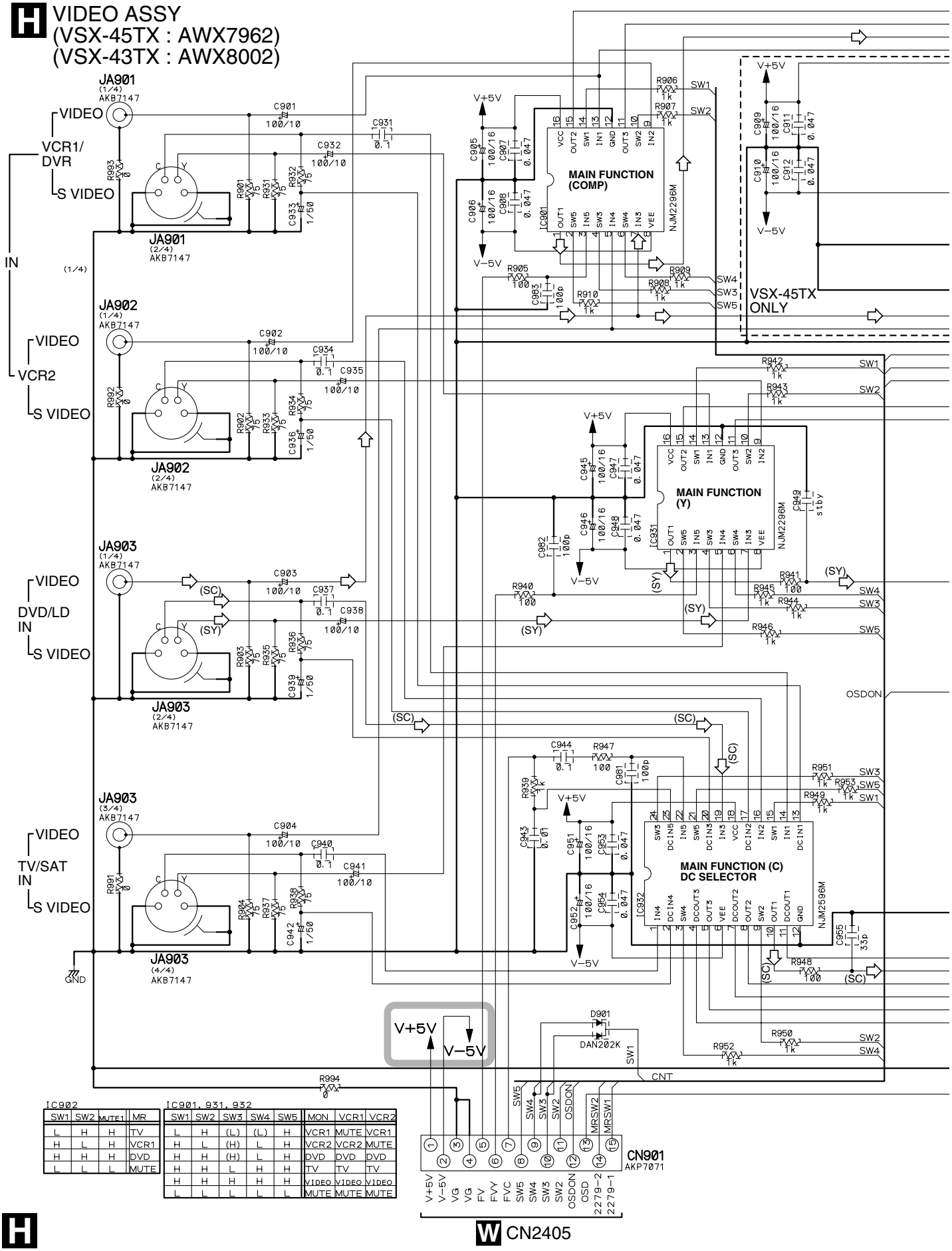

C V-AUDIO IN ASSY
(VSX-45TX : AWX7964)
(VSX-43TX : AWX7991)
VSX-45TX ONLY
MULTI-ROOM & SOURCE OUT
CN1205 (1/3)
MR MUTE
Q1201 2SC2878 (AB)
Q1202 2SC2878 (AB)
VSX-45TX : CN1205 (1/3-3/3) AKB7009
VSX-43TX : CN1202 (1/2-2/2) AKB7015
VCR1 IN
VCR1 OUT
VCR2 IN
VCR2 OUT
TV/SAT IN
DVD/LD IN
CHASSIS
CN1201 (1/2) AKB7015
CN1201 (2/2) AKB7015
CN1203 (1/2)
CN1203 (2/2)
CN1204 AKP7072
MRMUTE
MRR
MRL
V2OR
V1OR
DVDR
TVR
V2R
V1R
AG
AG
V1L
V2L
TVL
DVDL
V1OL
V2OL
F CN1405
: AUDIO SIGNAL ROUTE (Lch)
(MR) : AUDIO SIGNAL ROUTE (MULTI-ROOM Lch)
(DVD) : AUDIO SIGNAL ROUTE (DVD Lch)
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)
(D) : AUDIO SIGNAL ROUTE (DIGITAL)
D FRONT IN ASSY
(AWX7977)
JA1501 (1/4) AKX7016
JA1501 (2/4) AKX7016
JA1501 (3/4) AKX7016
JA1501 (4/4) AKX7016
VIDEO INPUT (FRONT)
AUDIO
VIDEO
S VIDEO
CN1501 52044-0745
FV-R
AG
FV-L
AG
FV
FV-C
FV-Y
S CN3005
GND
E OPTICAL IN ASSY
(AWX7978)
IN 1 (TV/SAT)
IN 2 (CD-R/TAPE1)
PCM/ DIGITAL/ DTS/MPEG
OUT 1
OUT 2
JA1701 GP1FA502RZ
JA1702 GP1FA502RZ
JA1703 GP1FA502TZ
JA1704 GP1FA502TZ
CN1701 52045-0945
D+5V
DIN1
DG (NC)
DIN2
DG (NC)
DOUT1
DG (NC)
DOUT2
DG
G CN1801
C D E

3.7 INPUT CONNECT and COAXIAL IN ASSYS



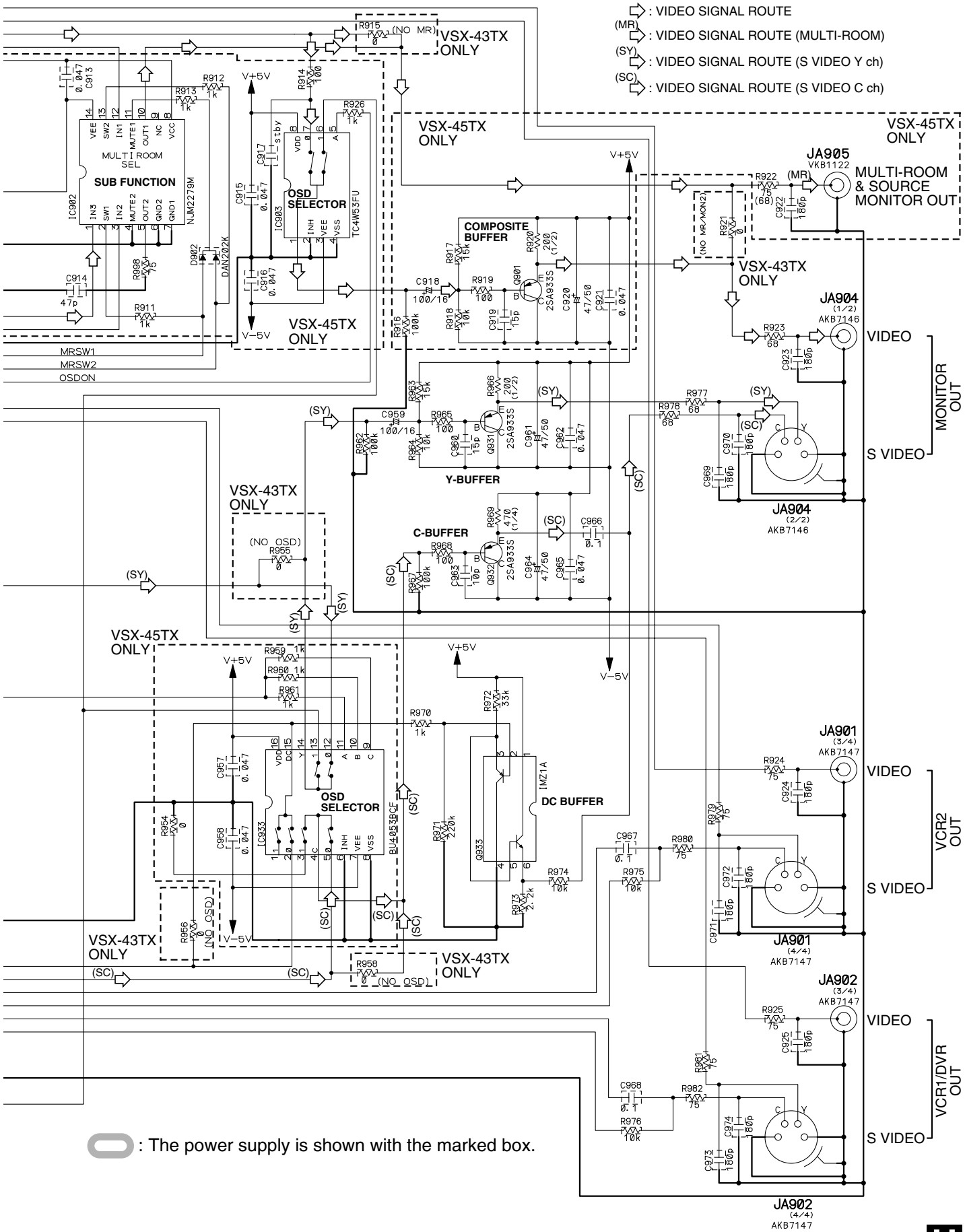

DIGITAL
USB AUDIO
JA1681
DKN1237
USB RECEIVER
IC1681
PCM2902EG
IC1682
TC7SET08F
VSX-45TX
ONLY
G COAXIAL IN ASSY (VSX-45TX : AWX7965)
(VSX-43TX : AWX8013)
: The power supply is shown with the marked box.
JA1802 (1/2)
AKB7131
IN 3
(CD-R/TAPE1)
IC1881
TC74HCU04AF
JA1802 (2/2)
IN 4
(CD)
CN1801
52045-0945
CN1701
CN1802
VKN1196
CN1803
AKP7068
R 1/2 CN101
W CN2406
A+15V
A–15V
DSP+5V
GNDD
GDCH
SSPEND
DIN
DOUT
(UD)
(D)

3.8 VIDEO ASSY



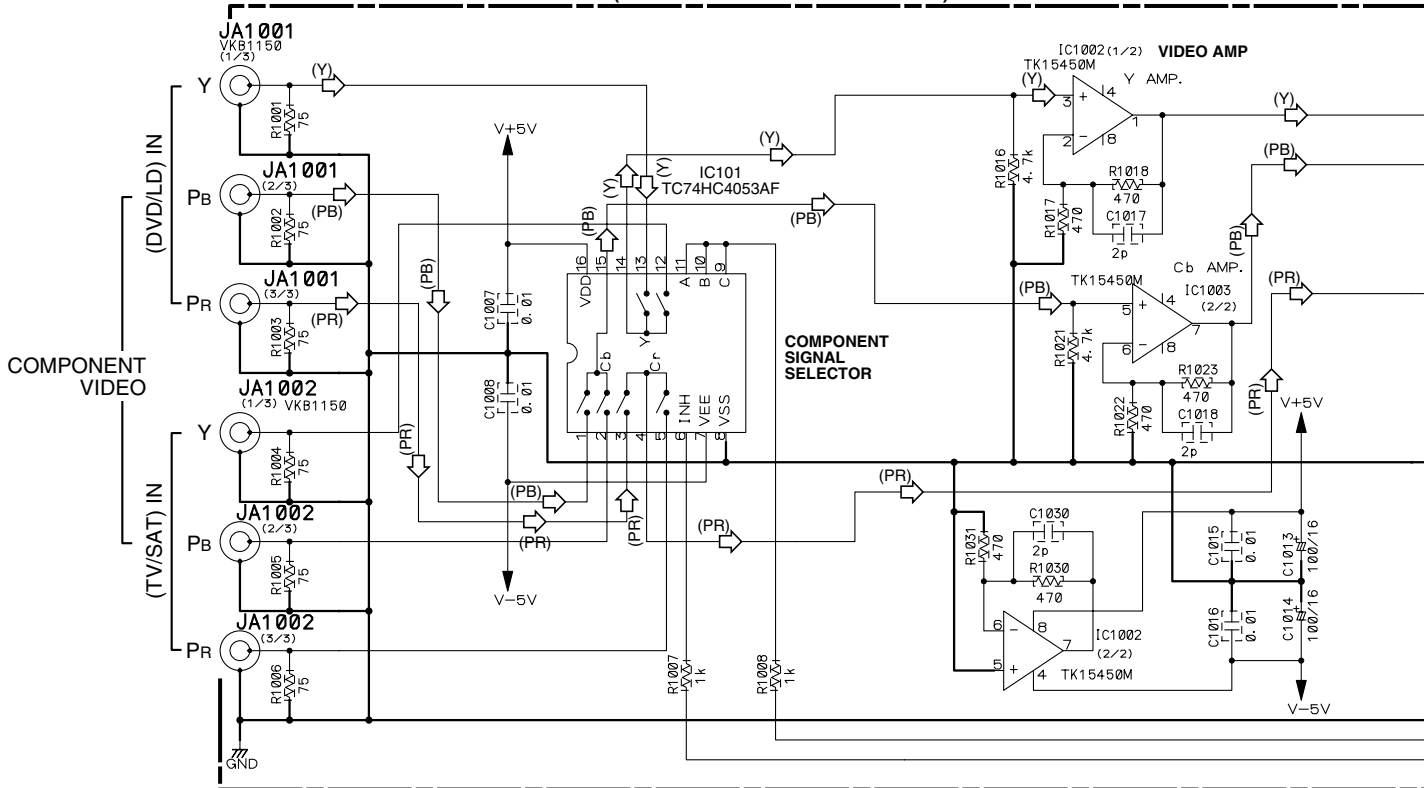
SW1	SW2	MUTE1	MR
L	H	H	TV
H	L	H	VCR1
H	H	H	DVD
L	L	L	MUTE

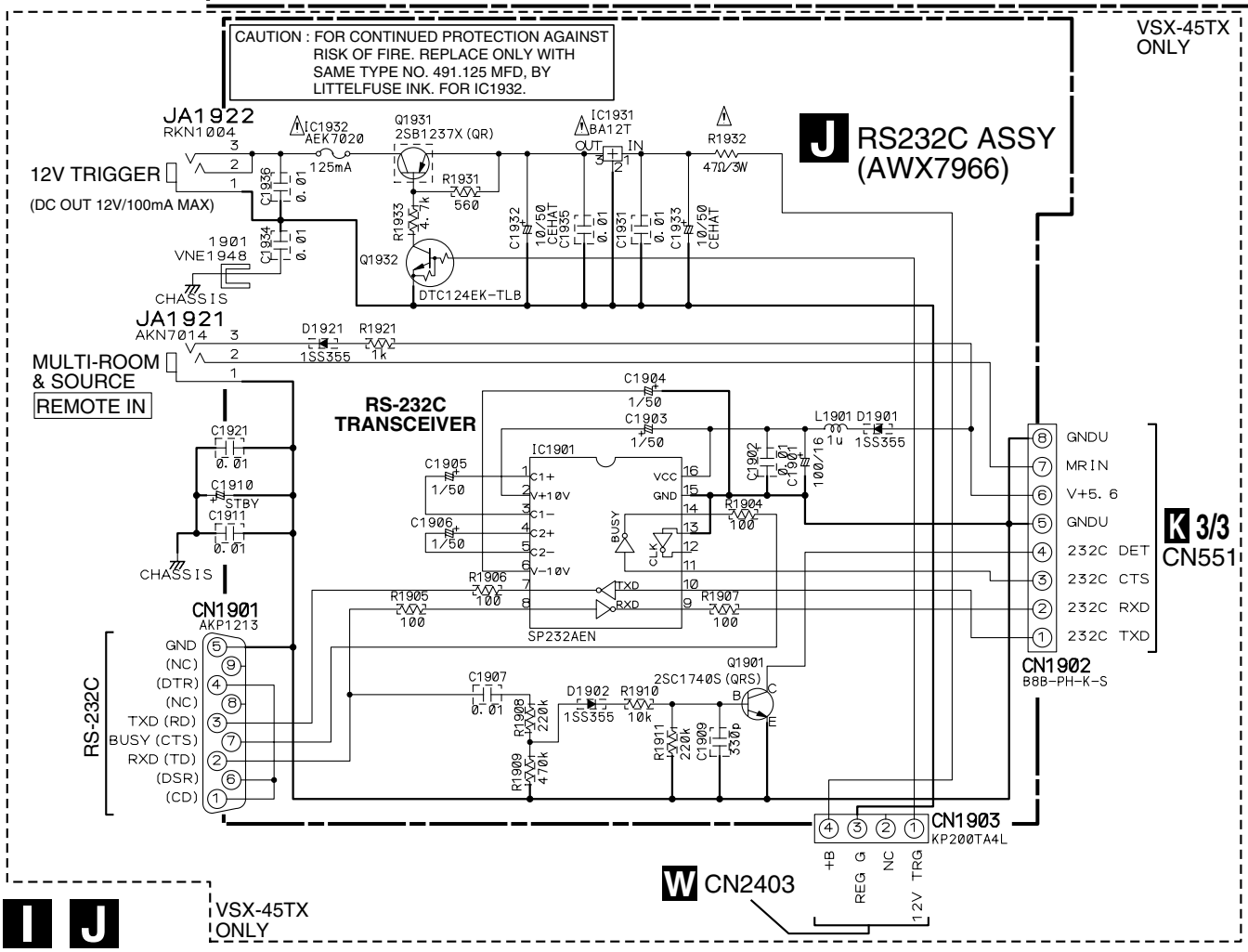
SW1	SW2	SW3	SW4	SW5	MON	VCR1	VCR2
L	H	(L)	(L)	H	VCR1	MUTE	VCR1
H	L	(H)	L	H	VCR2	VCR2	MUTE
H	H	(H)	L	H	DVD	DVD	DVD
H	H	L	H	H	TV	TV	TV
H	H	H	H	H	VIDEO	VIDEO	VIDEO
L	L	L	L	L	MUTE	MUTE	MUTE


: VIDEO SIGNAL ROUTE
(MR) : VIDEO SIGNAL ROUTE (MULTI-ROOM)
(SY) : VIDEO SIGNAL ROUTE (S VIDEO Y ch)
(SC) : VIDEO SIGNAL ROUTE (S VIDEO C ch)
VSX-43TX ONLY
MULTI ROOM SEL
SUB FUNCTION
IC902
NJM2279M
OSD SELECTOR
IC903
TC4W53FU
COMPOSITE BUFFER
Y-BUFFER
C-BUFFER
DC BUFFER
JA905
VKB1122
MULTI-ROOM & SOURCE MONITOR OUT
JA904
(1/2)
AKB7146
JA904
(2/2)
AKB7146
JA901
(3/4)
AKB7147
JA901
(4/4)
AKB7147
JA902
(3/4)
AKB7147
JA902
(4/4)
AKB7147
VIDEO
S VIDEO
MONITOR OUT
VCR2 OUT
VCR1/DVR OUT
MRSW1
MRSW2
OSDON
V+5V
V−5V
(NO MR)
(NO OSD)
: The power supply is shown with the marked box.

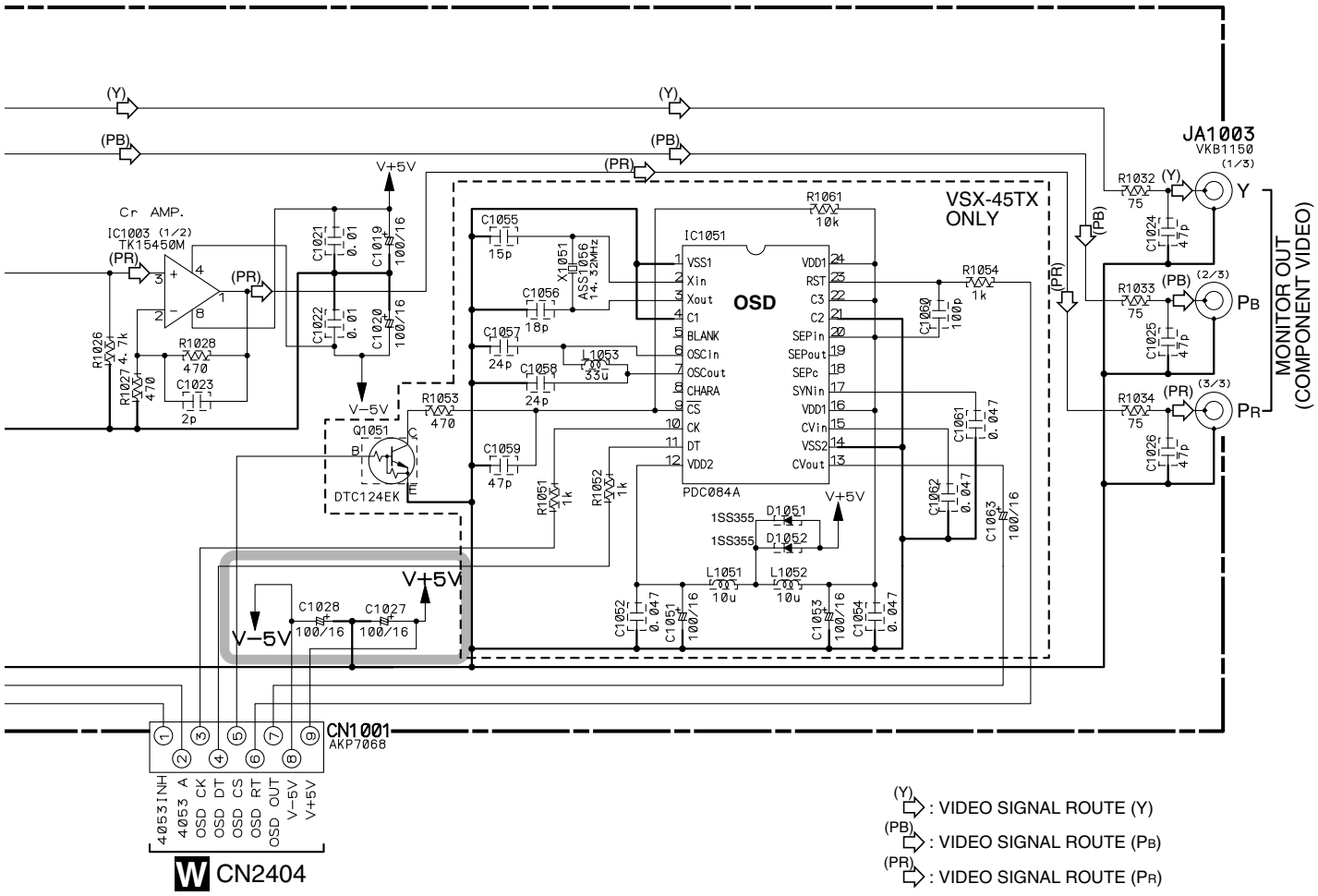
3.9 COMPONENT and RS232C ASSYS

I COMPONENT ASSY (VSX-45TX : AWX7963) (VSX-43TX : AWX8021)

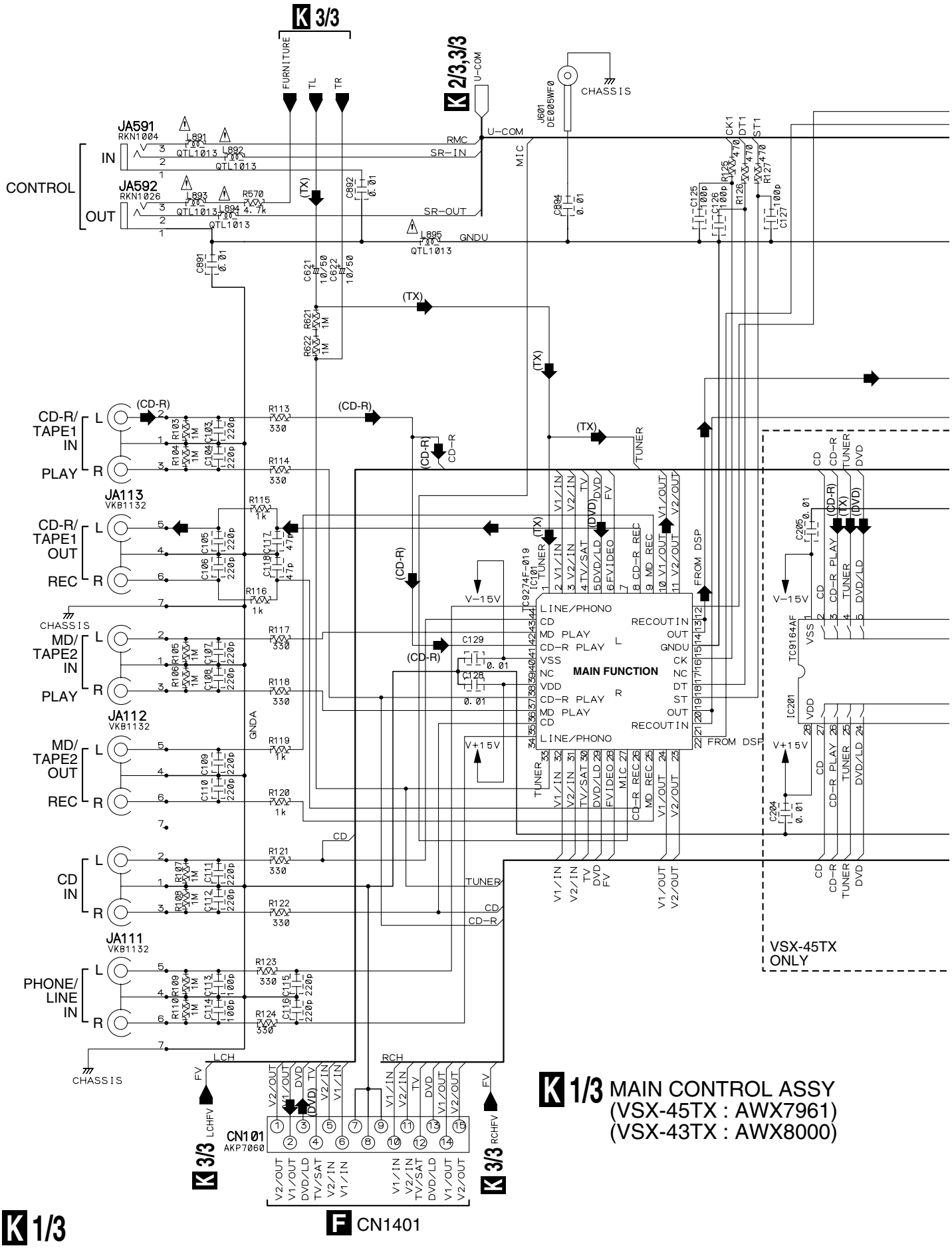


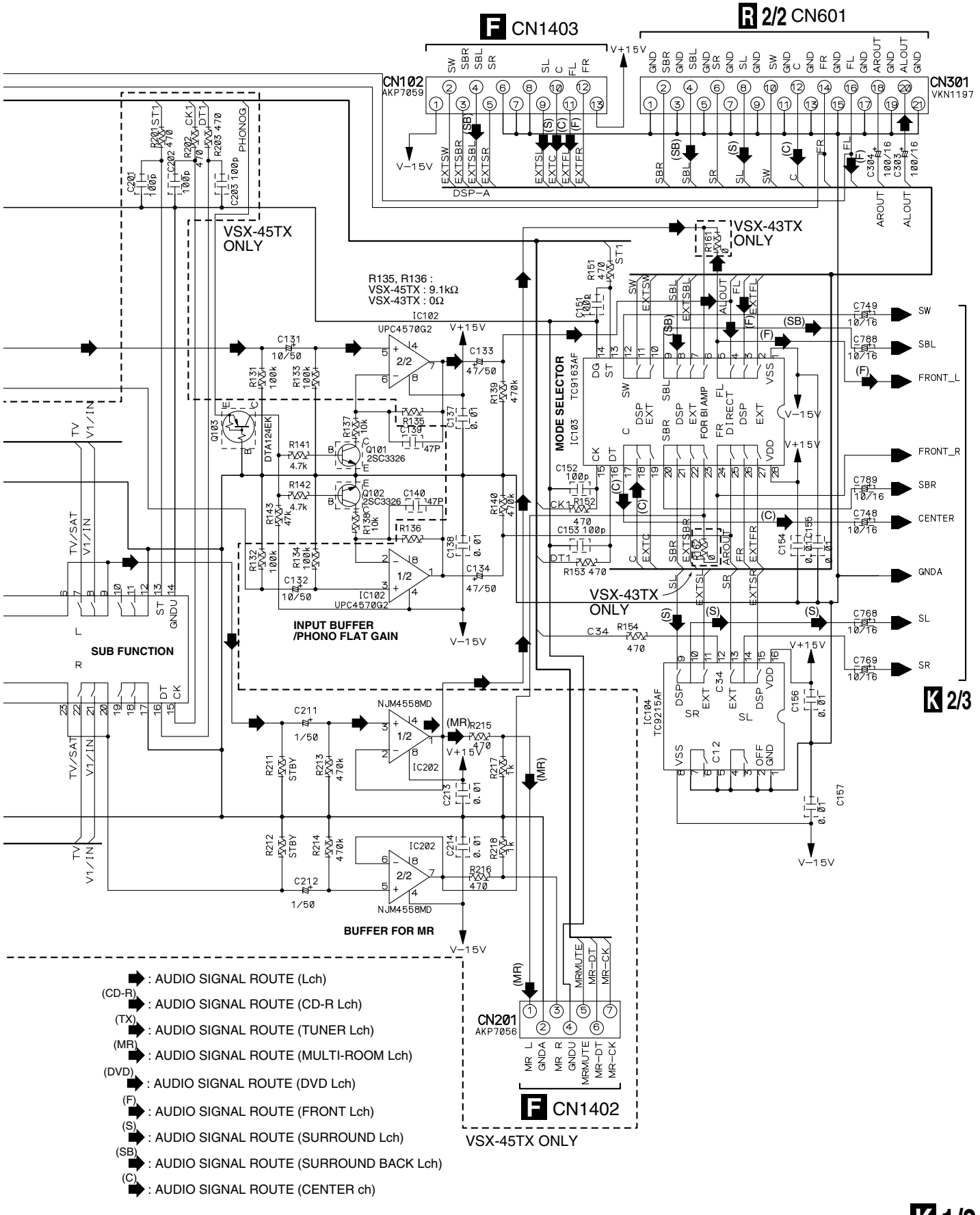


: The power supply is shown with the marked box.

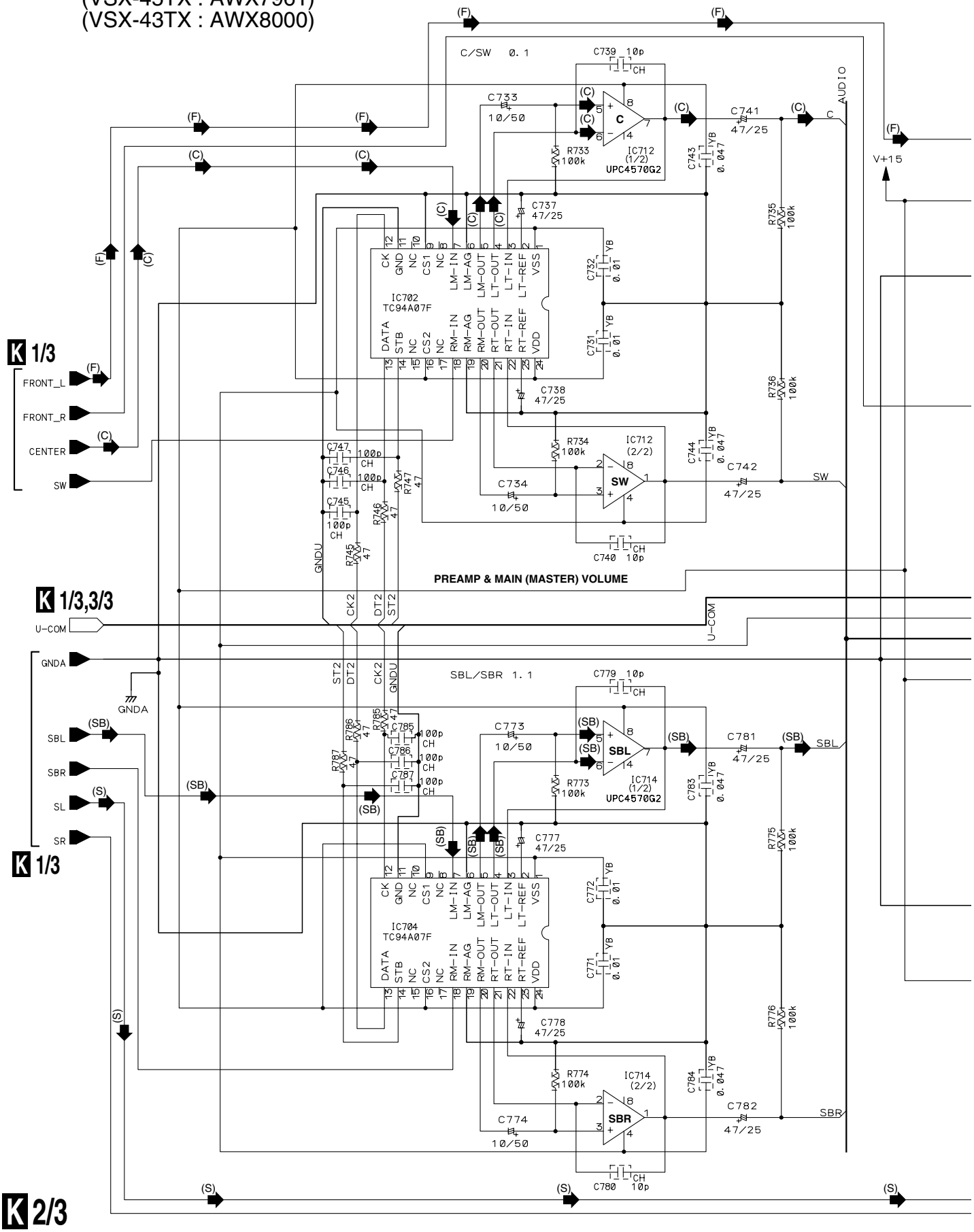


3.10 MAIN CONTROL ASSY (1/3)

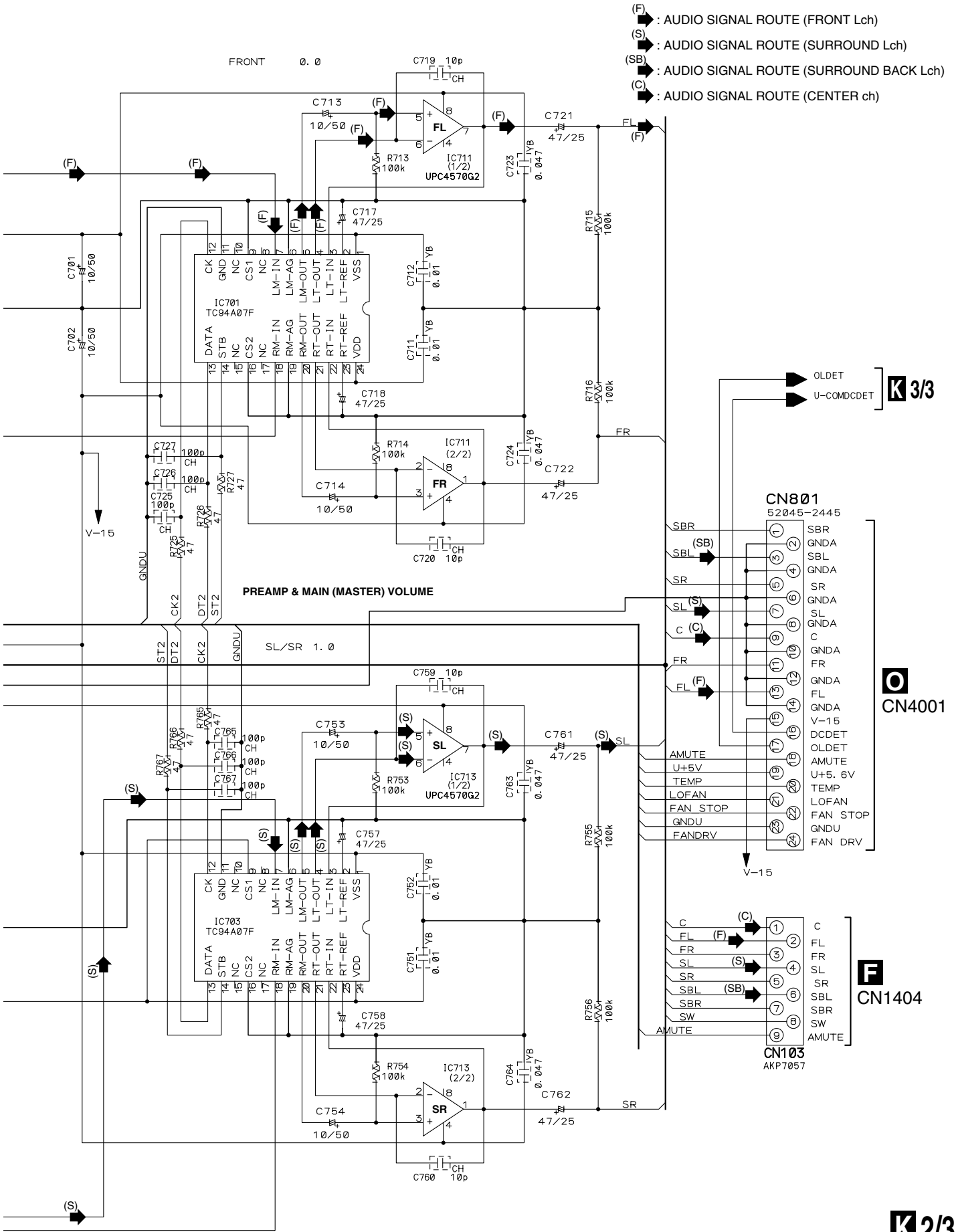



F CN1403
R 2/2 CN601
CN102
AKP7059
CN301
VKN1197
DSP-A
V+15V
V-15V
VSX-45TX ONLY
VSX-43TX ONLY
R135, R136 :
VSX-45TX : 9.1kΩ
VSX-43TX : 0Ω
IC102
UPC4570G2
IC103
TC9163AF
MODE SELECTOR
IC104
TC9215AF
IC202
NJM4558MD
INPUT BUFFER /PHONO FLAT GAIN
SUB FUNCTION
BUFFER FOR MR
CN201
AKP7056
F CN1402
K 2/3
K 1/3
: AUDIO SIGNAL ROUTE (Lch)
(CD-R) : AUDIO SIGNAL ROUTE (CD-R Lch)
(TX) : AUDIO SIGNAL ROUTE (TUNER Lch)
(MR) : AUDIO SIGNAL ROUTE (MULTI-ROOM Lch)
(DVD) : AUDIO SIGNAL ROUTE (DVD Lch)
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)

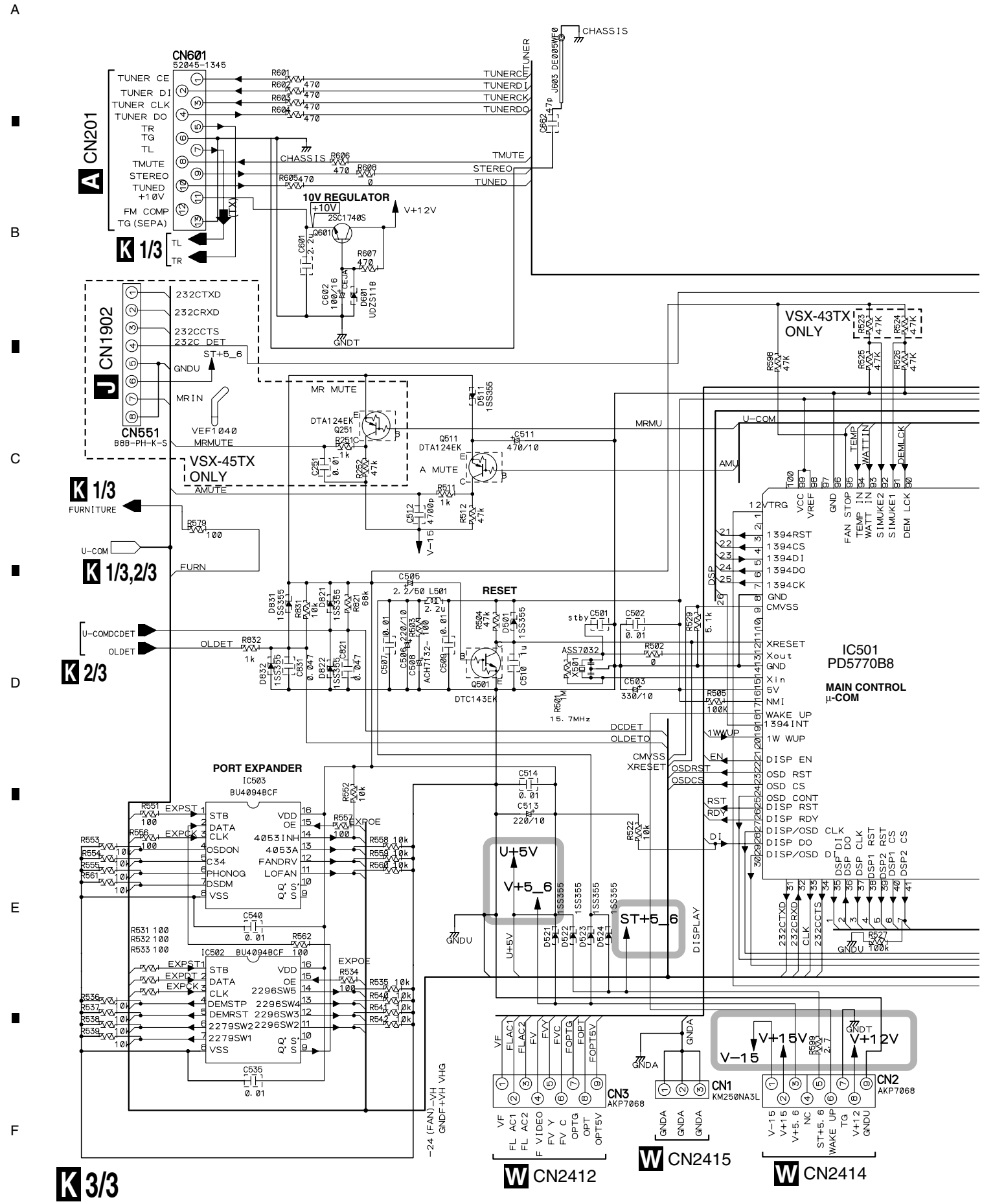
3.11 MAIN CONTROL ASSY (2/3)



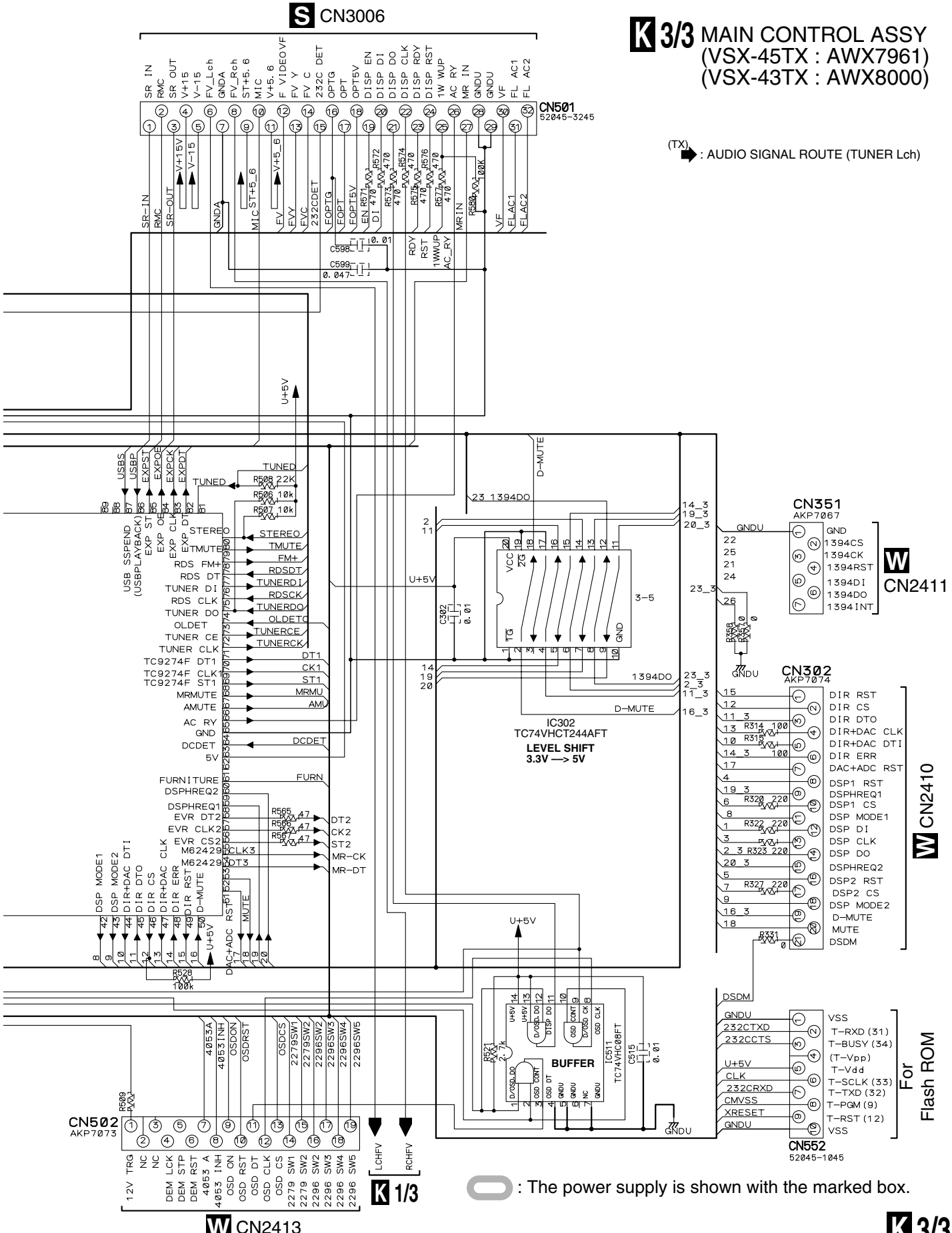
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)



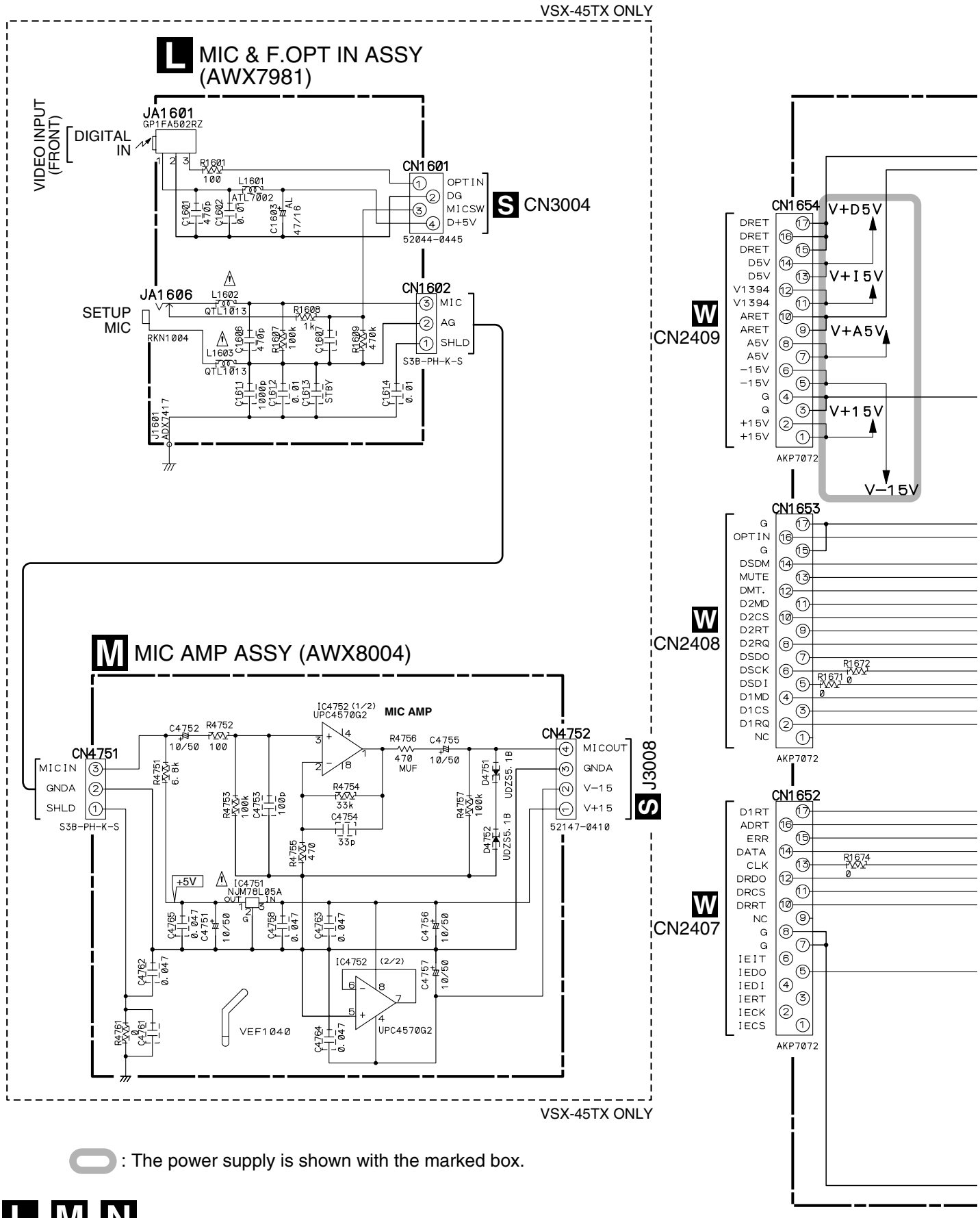
3.12 MAIN CONTROL ASSY (3/3)



K 3/3 MAIN CONTROL ASSY
(VSX-45TX : AWX7961)
(VSX-43TX : AWX8000)



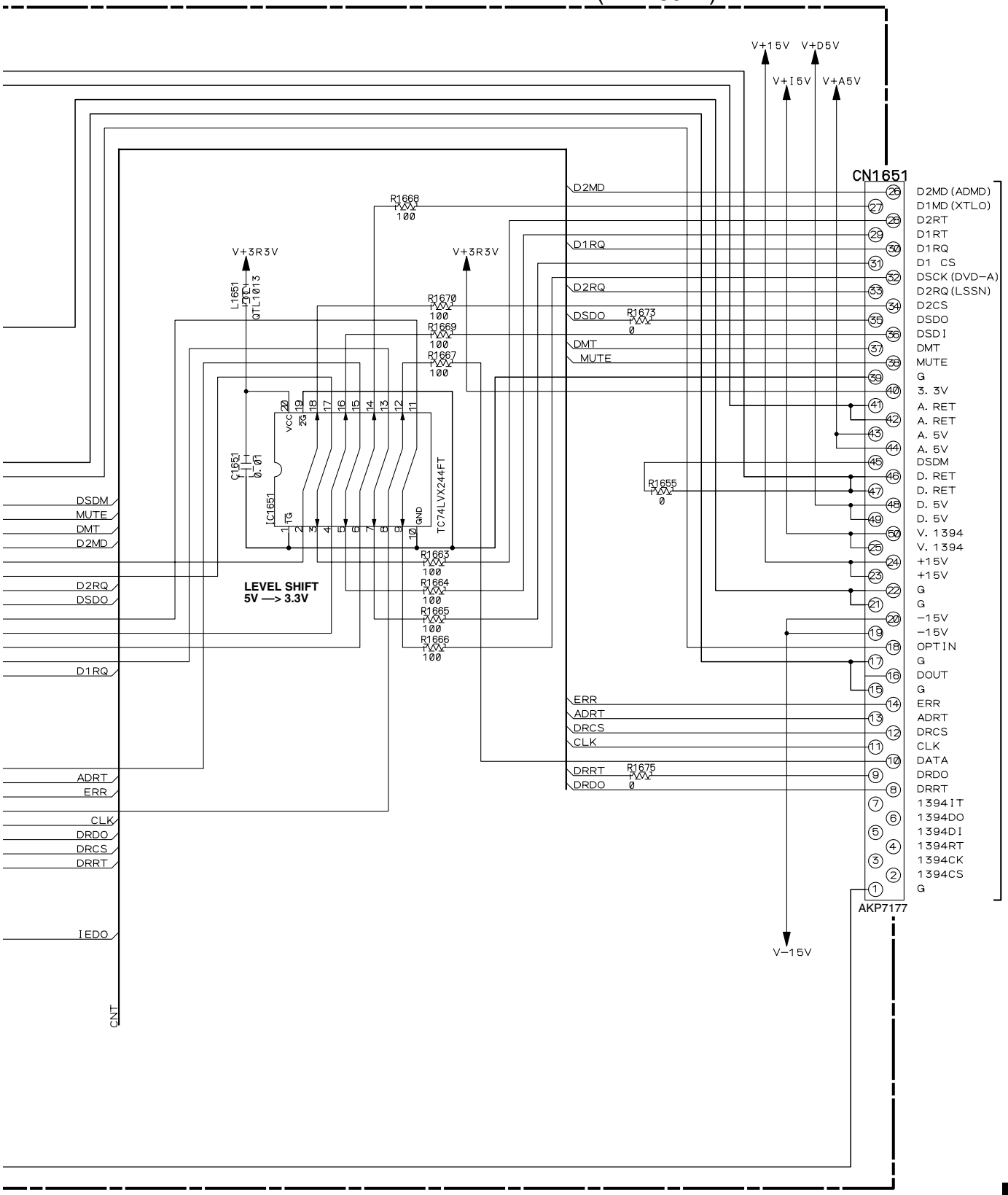
3.13 MIC & F.OPT IN, MIC AMP and DSP CONNECTION ASSYS



: The power supply is shown with the marked box.

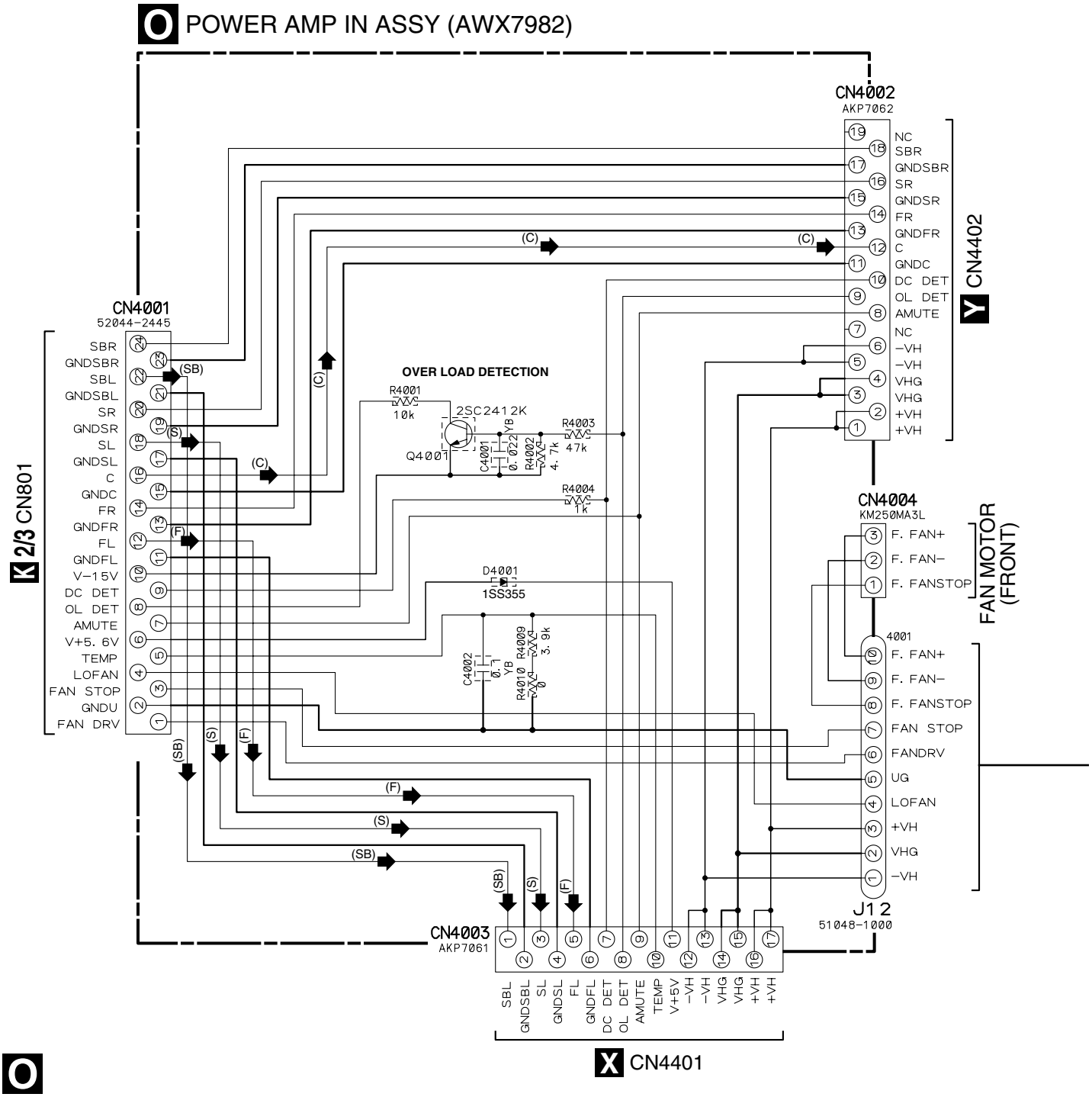
L M N

N DSP CONNECTION ASSY (AWX8024)



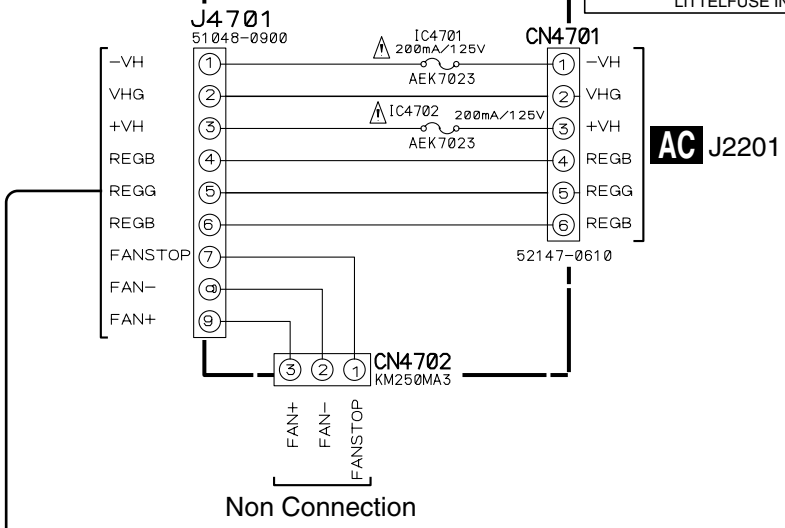
3.14 POWER AMP IN, FAN DRIVE and FAN CONNECTION ASSYS

(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)



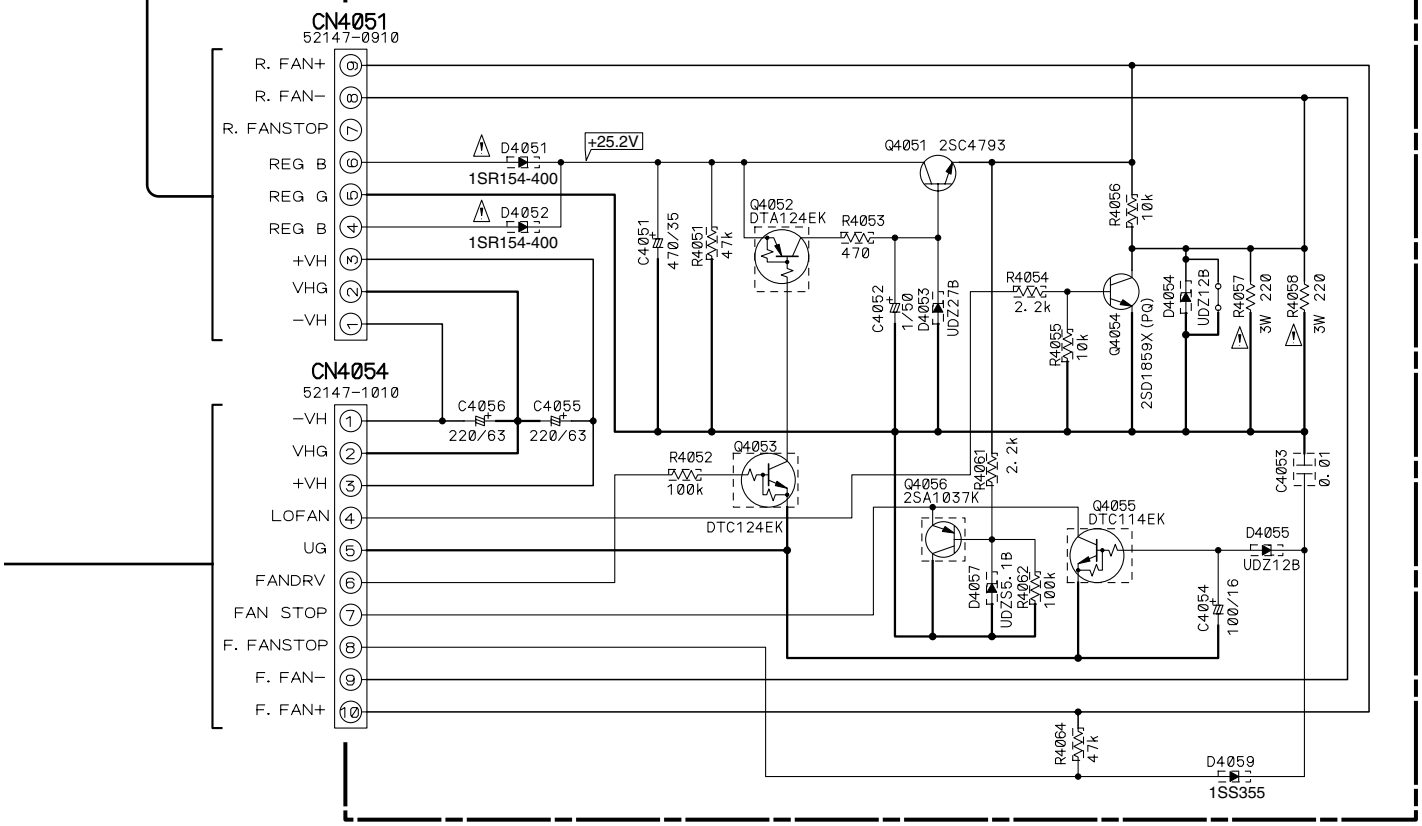
Q FAN CONNECTION ASSY (AWX8005)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.200 MFD, BY LITTELFUSE INK. FOR IC4701 AND IC4702.

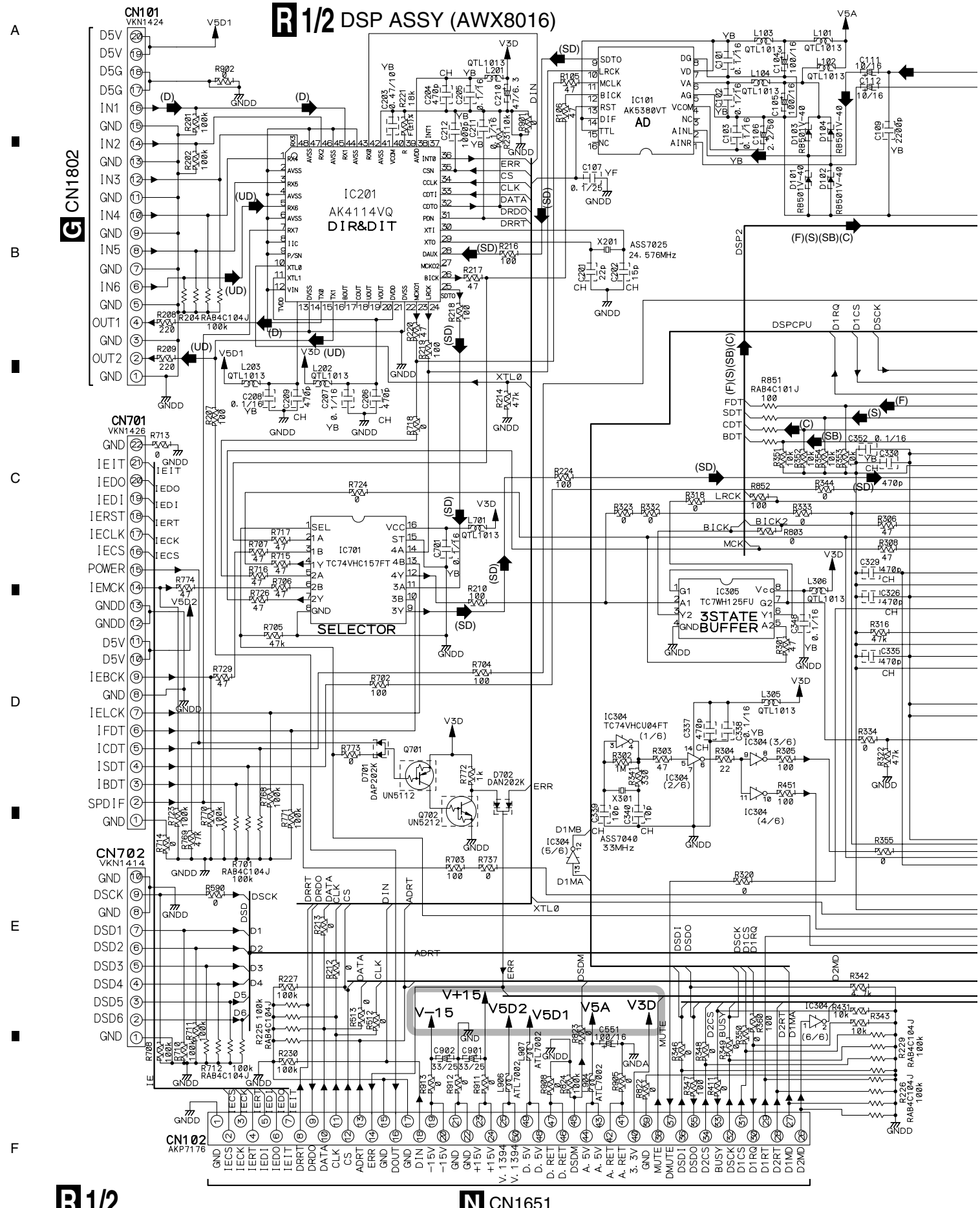


CFTYA□□□J50–T
CFTLA□□□J2A–T
CCSRCH□□□J50–T
CKSRYB□□□K50–T
CKSRYF□□□Z25–T
1SS355–TRB
RS1/16S□□□J–T
RDR1/4VM□□□J–T
RD1/4MUF□□□J–T
RS3LMF□□□J
NON–FRAMABLE

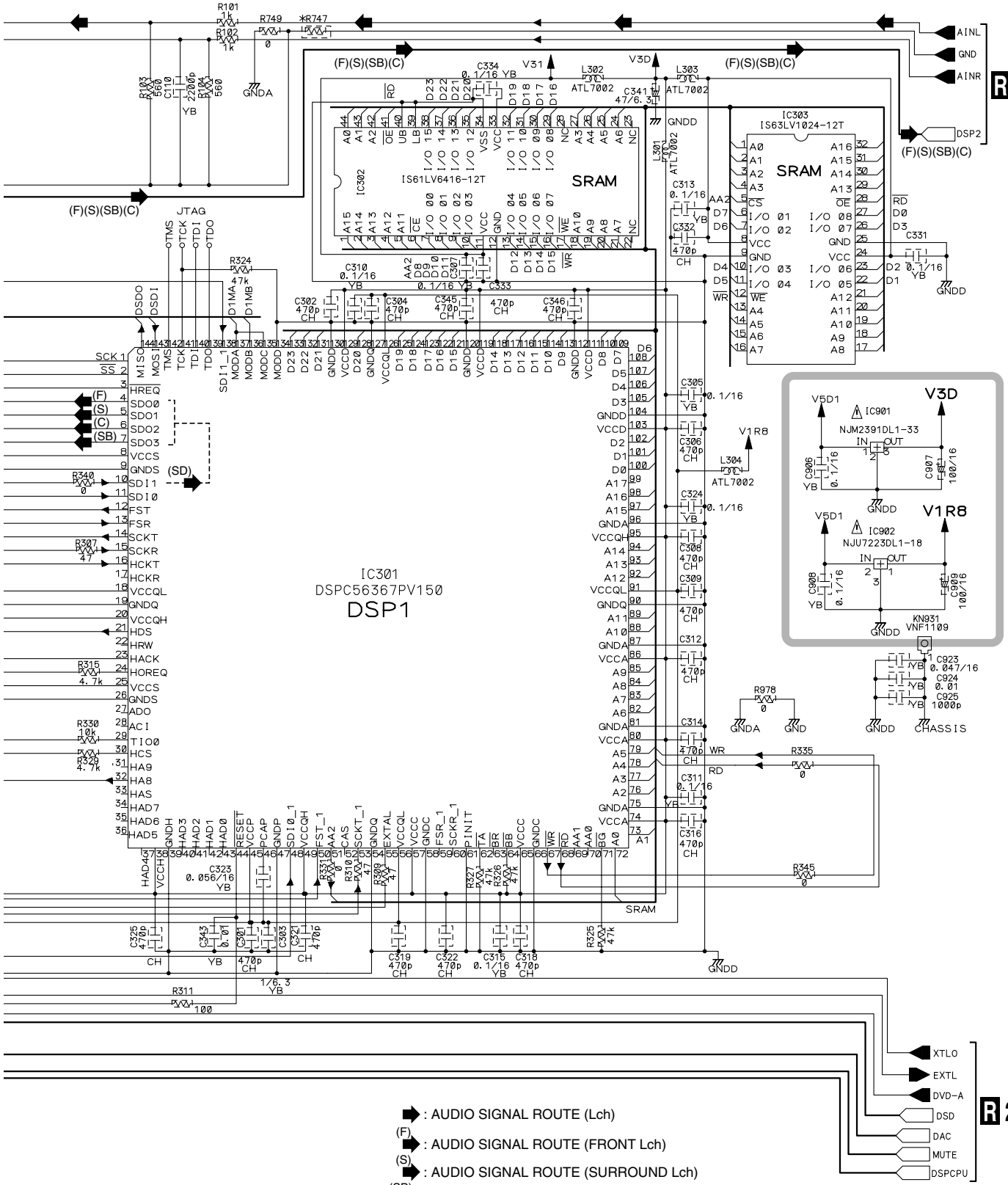
P FAN DRIVE ASSY (AWX7976)



3.15 DSP ASSY (1/2)



: The power supply is shown with the marked box.



: AUDIO SIGNAL ROUTE (Lch)

(F) : AUDIO SIGNAL ROUTE (FRONT Lch)

(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)

(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)

(C) : AUDIO SIGNAL ROUTE (CENTER ch)

(SD) : SURROUND DATA SIGNAL ROUTE

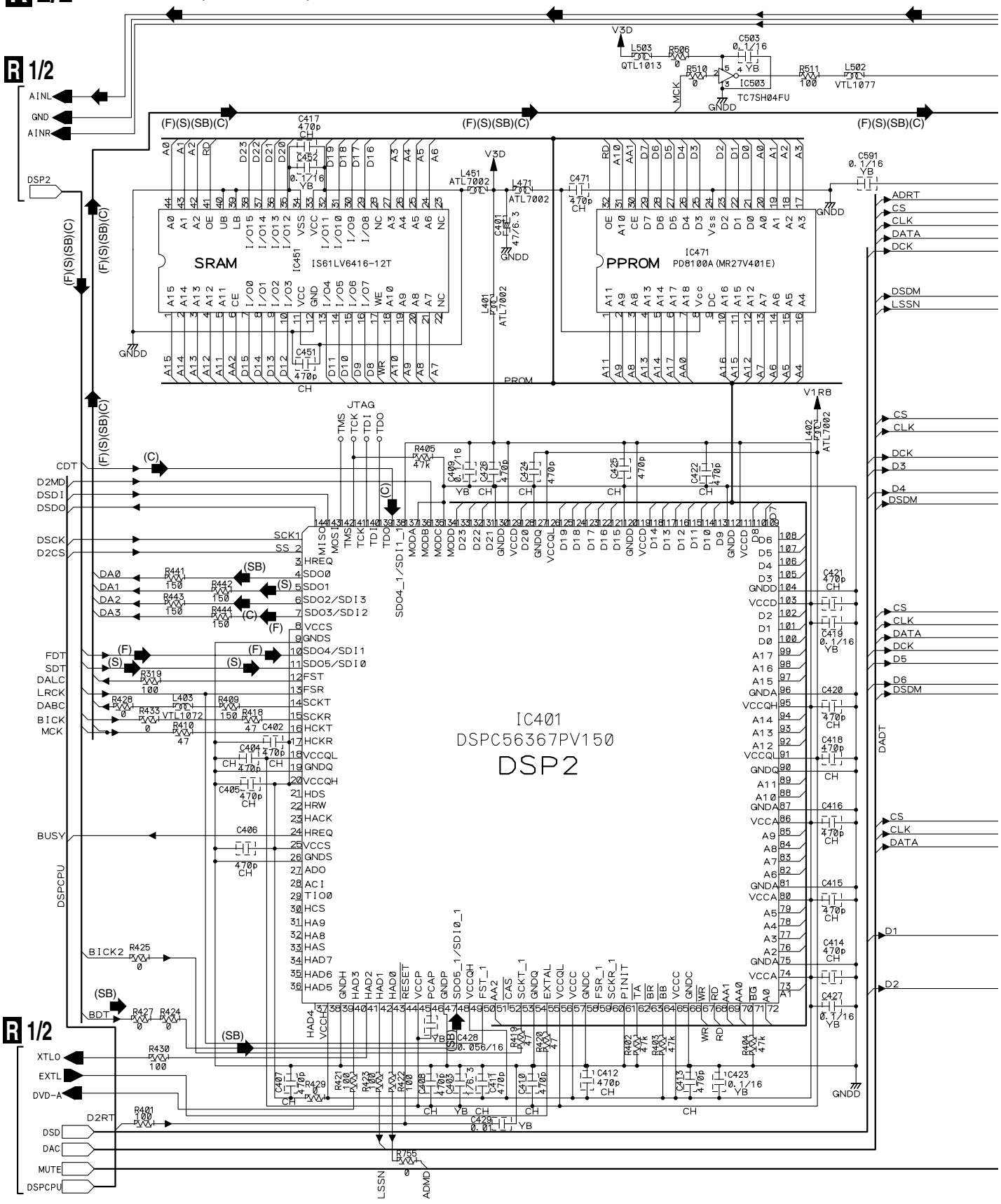
(D) : AUDIO SIGNAL ROUTE (DIGITAL)

(UD) : AUDIO SIGNAL ROUTE (USB DIGITAL)

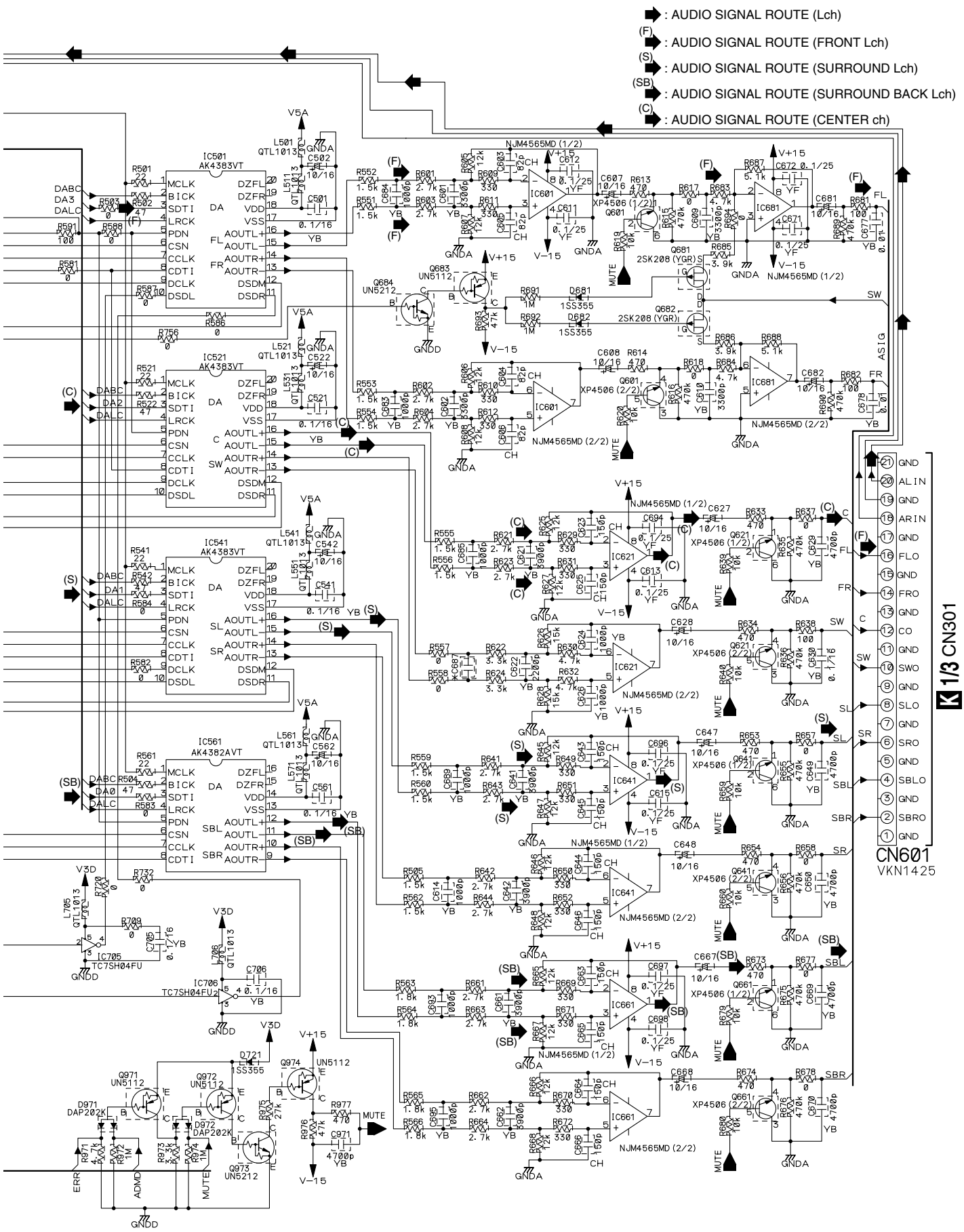
R 1/2

3.16 DSP ASSY (2/2)

R 2/2 DSP ASSY (AWX8016)

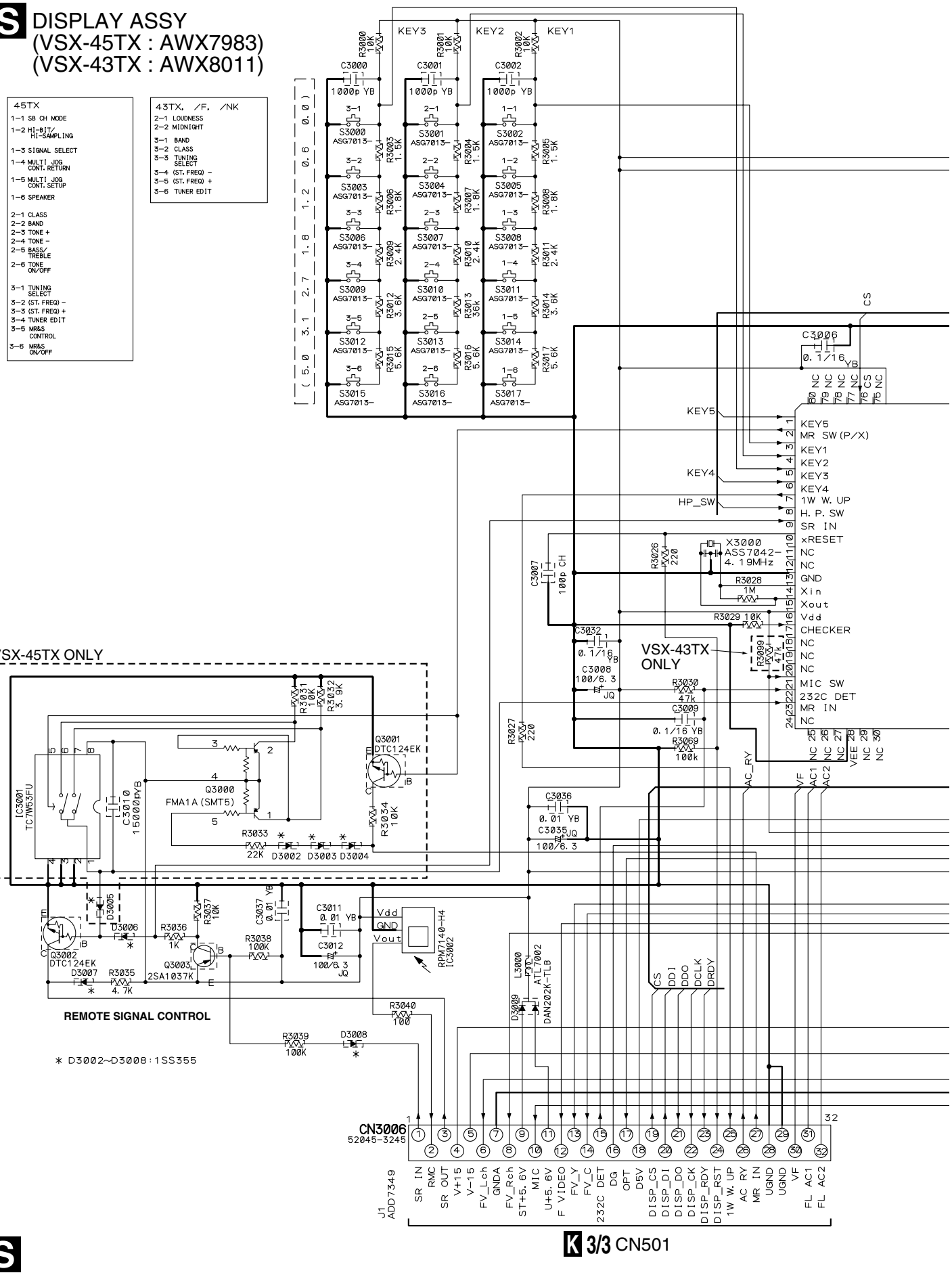


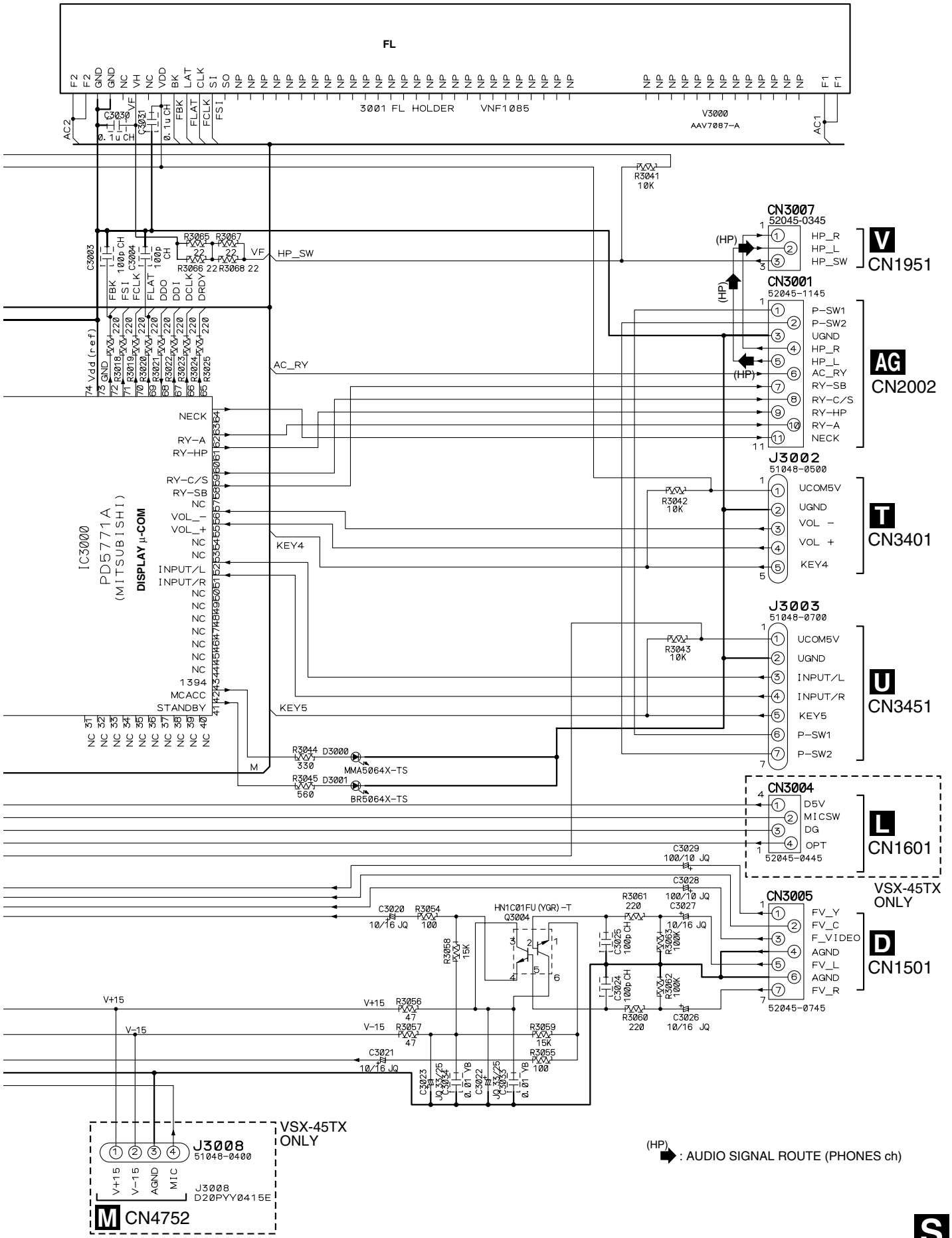
R 2/2


: AUDIO SIGNAL ROUTE (Lch)
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)
IC501 AK4383VT
IC521 AK4383VT
IC541 AK4383VT
IC561 AK4382AVT
NJM4565MD (1/2)
NJM4565MD (2/2)
XP4506 (1/2)
XP4506 (2/2)
IC705 TC7SH04FU
IC706 TC7SH04FU
Q971 UN5112
Q972 UN5112
Q973 UN5212
Q974 UN5112
D971 DAP202K
D972 DAP202K
D721 1SS355
ERR
ADMD
MUTE
CN601
VKN1425
1/3 CN301
GND
AL IN
AR IN
FL O
FR O
CO
SW O
SL O
SR O
SBL O
SBR O

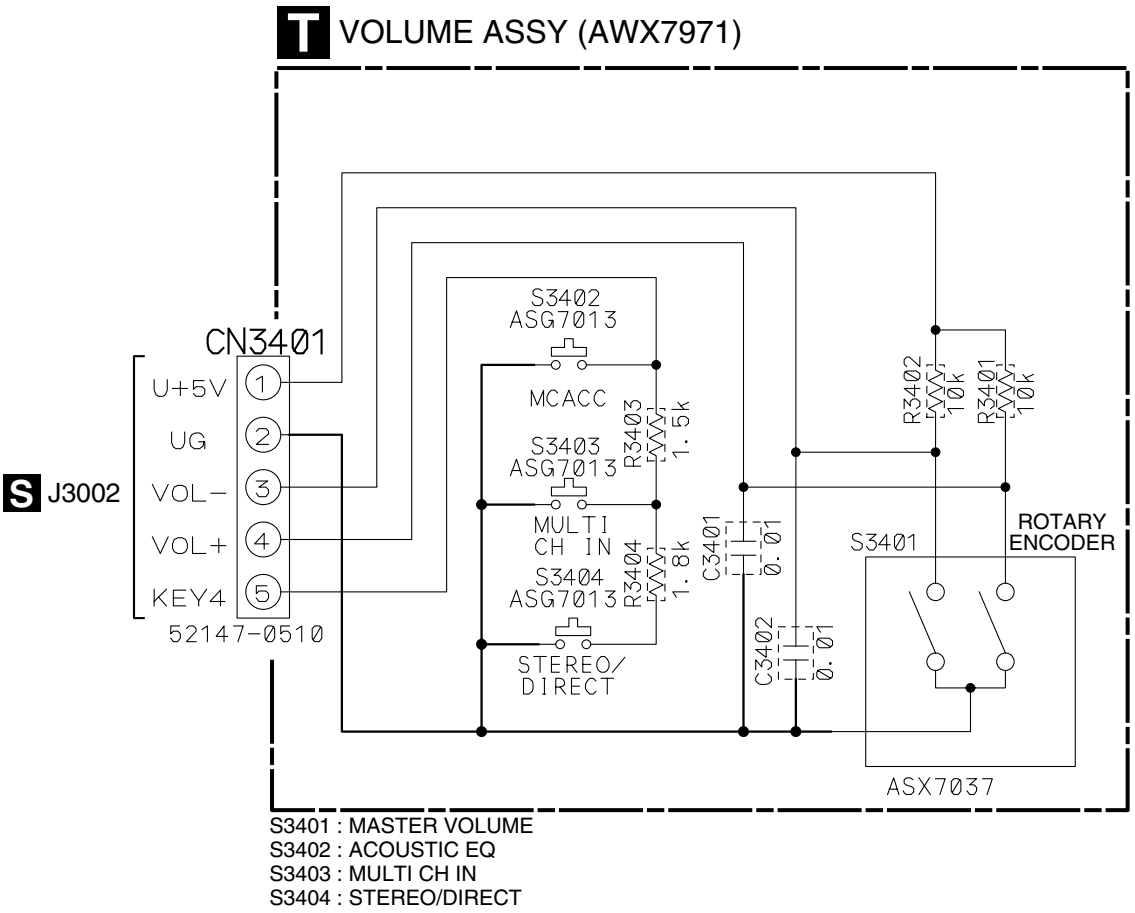
3.17 DISPLAY ASSY

S DISPLAY ASSY
(VSX-45TX : AWX7983)
(VSX-43TX : AWX8011)



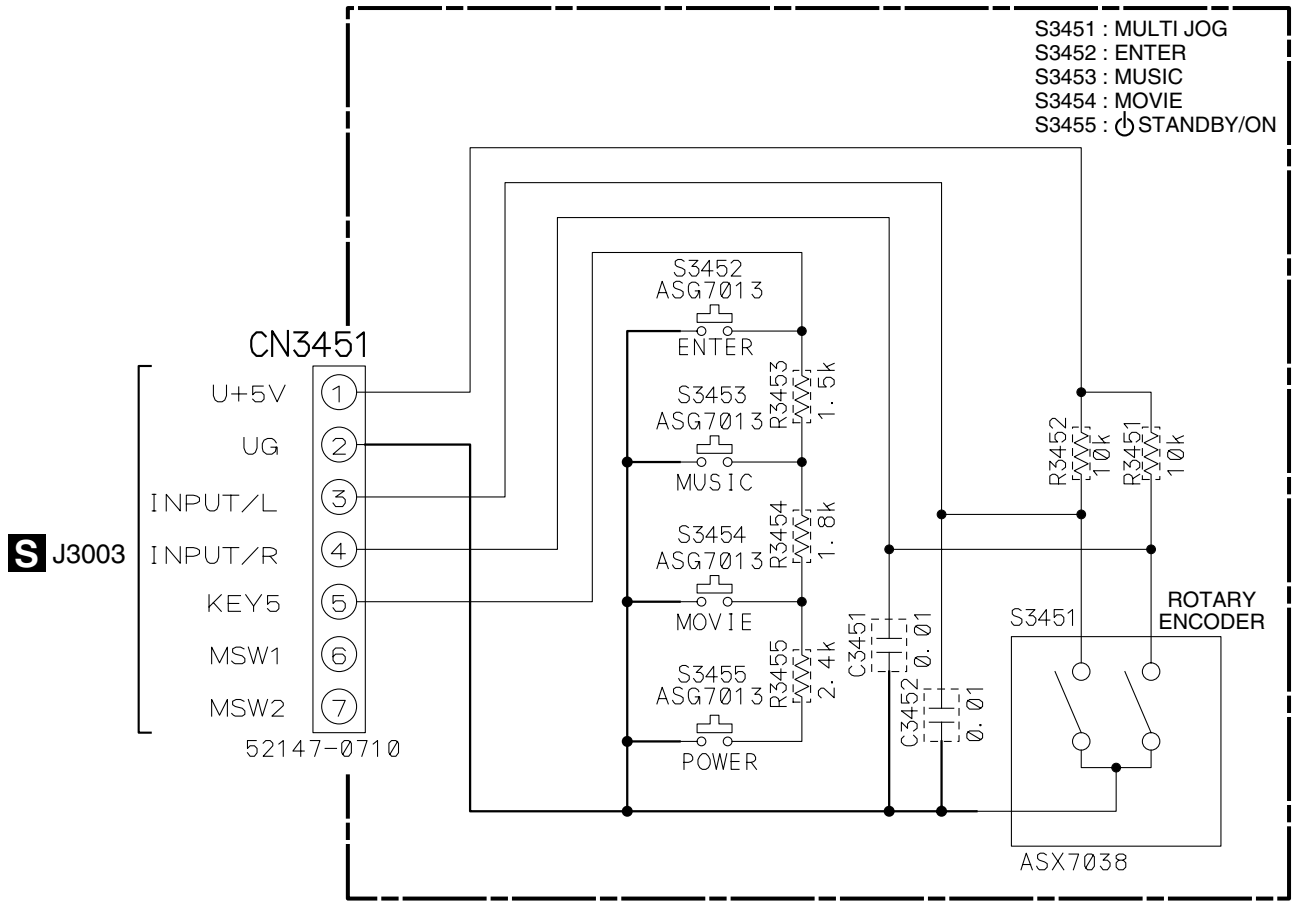

FL
3001 FL HOLDER VNF1085
V3000
AAV7087-A
IC3000
PD5771A
(MITSUBISHI)
DISPLAY µ-COM
CN3007
52045-0345
HP_R
HP_L
HP_SW
V
CN1951
CN3001
52045-1145
P-SW1
P-SW2
UGND
HP_R
HP_L
AC_RY
RY-SB
RY-C/S
RY-HP
RY-A
NECK
AG
CN2002
J3002
51048-0500
UCOM5V
UGND
VOL −
VOL +
KEY4
T
CN3401
J3003
51048-0700
UCOM5V
UGND
INPUT/L
INPUT/R
KEY5
P-SW1
P-SW2
U
CN3451
CN3004
D5V
MICSW
DG
OPT
52045-0445
L
CN1601
VSX-45TX ONLY
CN3005
FV_Y
FV_C
F_VIDEO
AGND
FV_L
AGND
FV_R
52045-0745
D
CN1501
HN1C01FU (YGR) -T
Q3004
J3008
51048-0400
V+15
V-15
AGND
MIC
J3008
D20PYY0415E
M
CN4752
VSX-45TX ONLY
(HP) : AUDIO SIGNAL ROUTE (PHONES ch)

3.18 VOLUME, MULTI JOG and HEADPHONE ASSYS



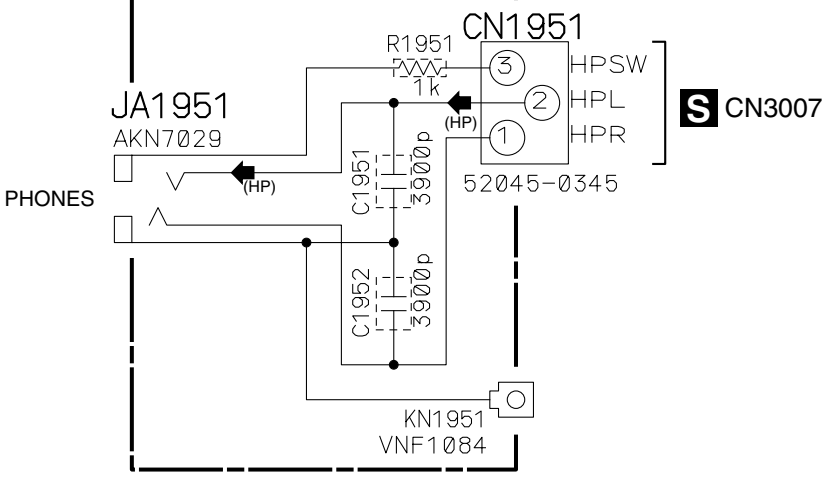
S3401 : MASTER VOLUME
S3402 : ACOUSTIC EQ
S3403 : MULTI CH IN
S3404 : STEREO/DIRECT

U MULTI JOG ASSY (AWX7972)



(HP) ➡ : AUDIO SIGNAL ROUTE (PHONES ch)

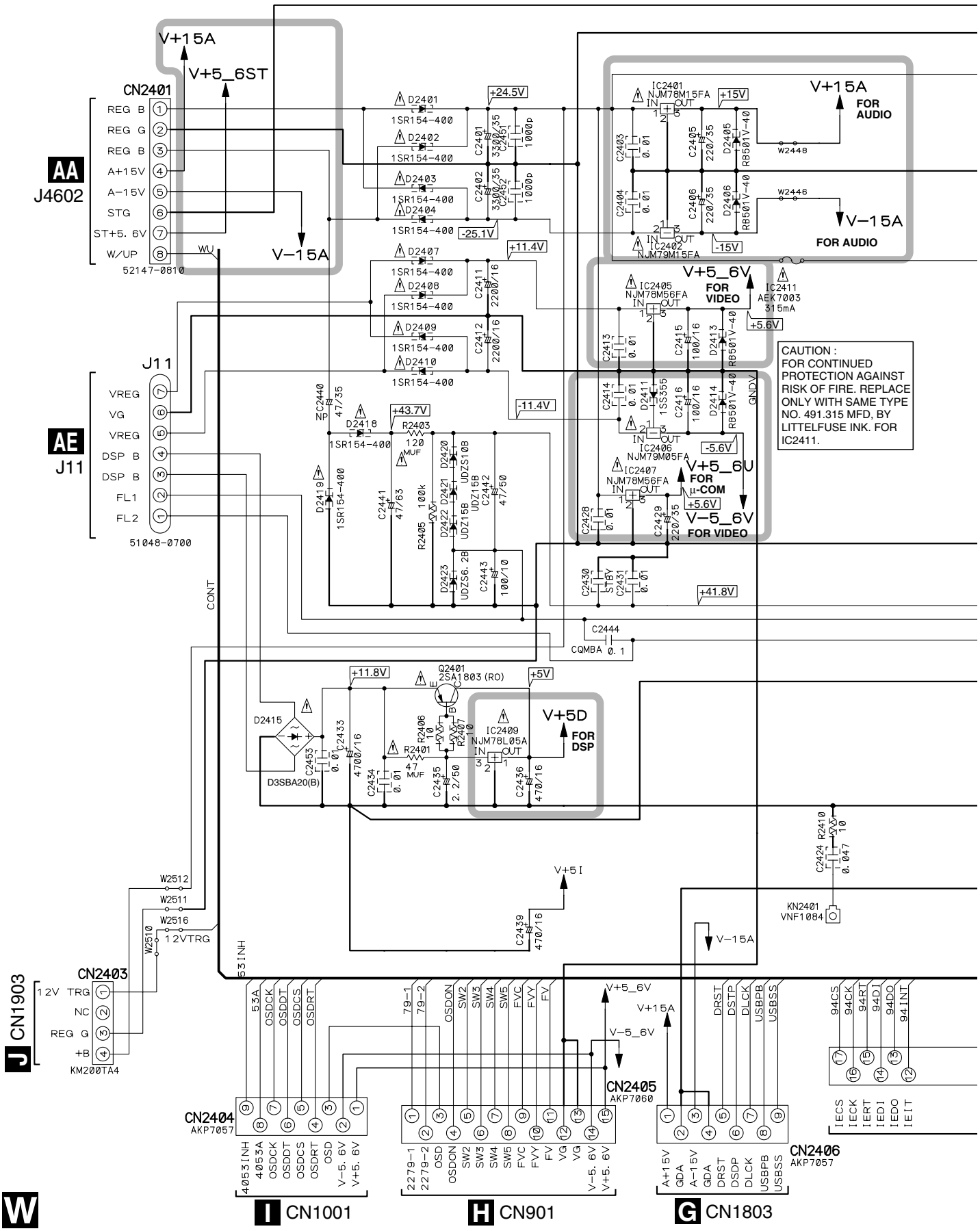
V HEADPHONE ASSY (AWX7980)

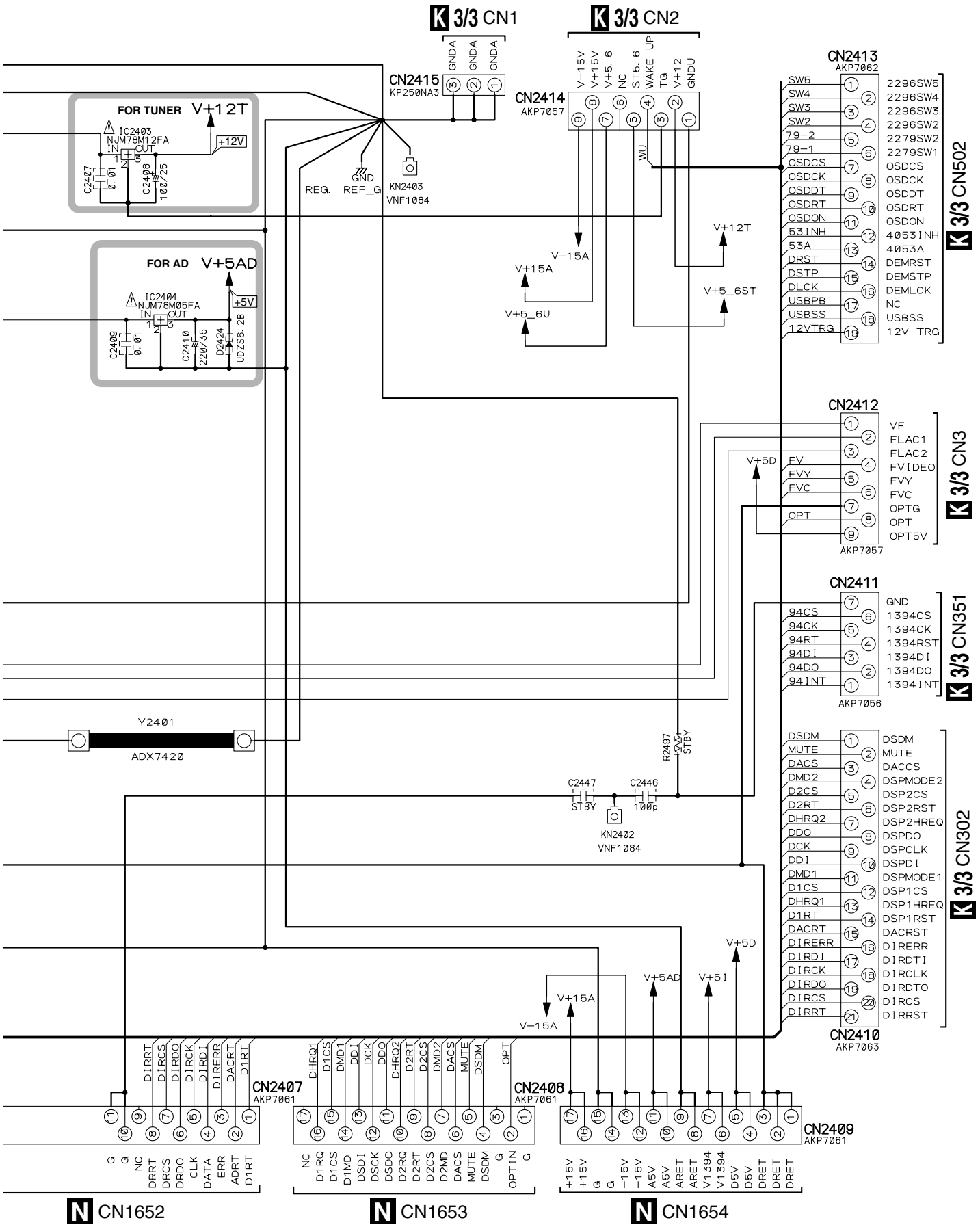


U V

3.19 REGULATOR ASSY

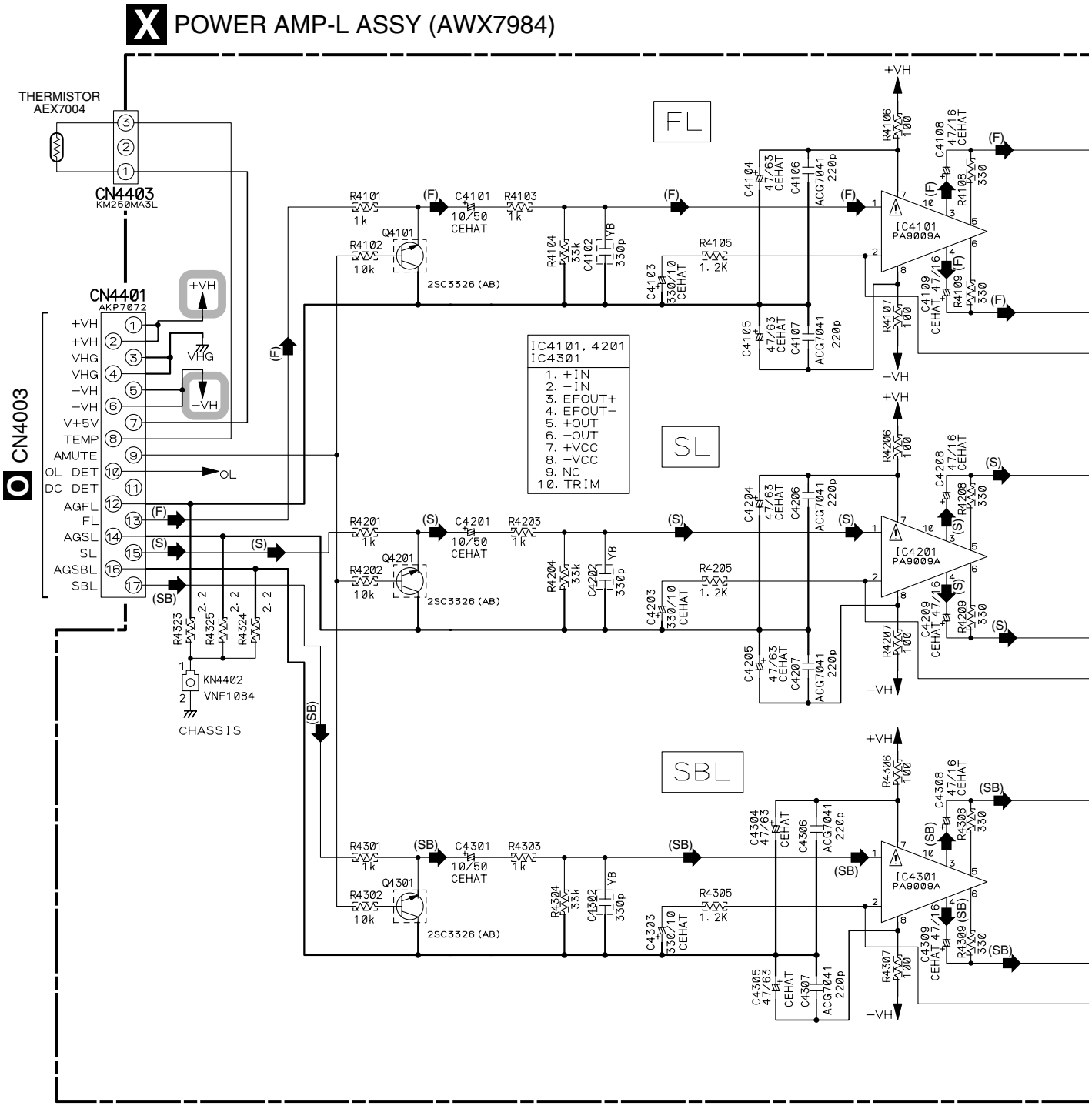
W REGULATOR ASSY (AWX7967)





: The power supply is shown with the marked box.

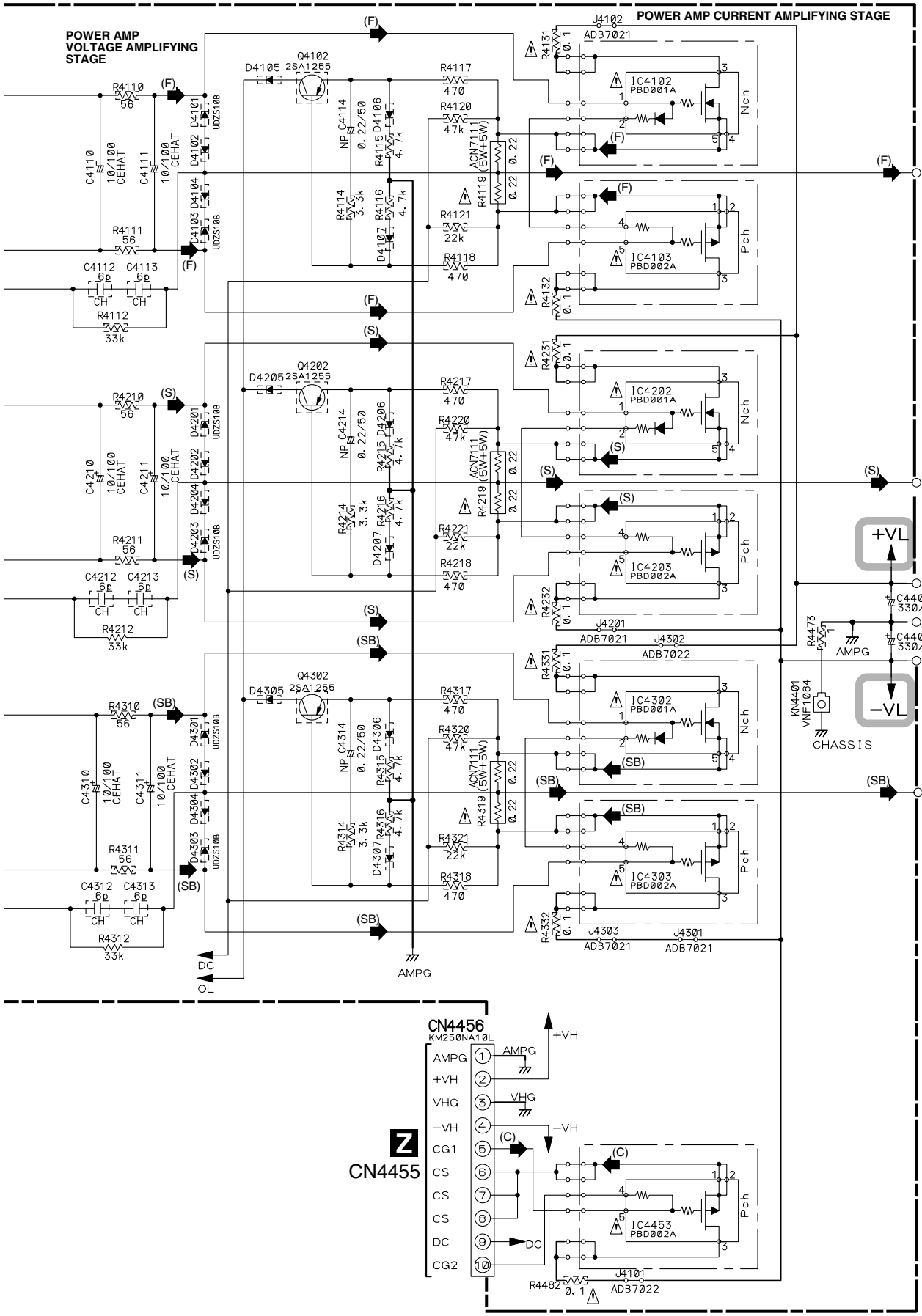
3.20 POWER AMP-L ASSY



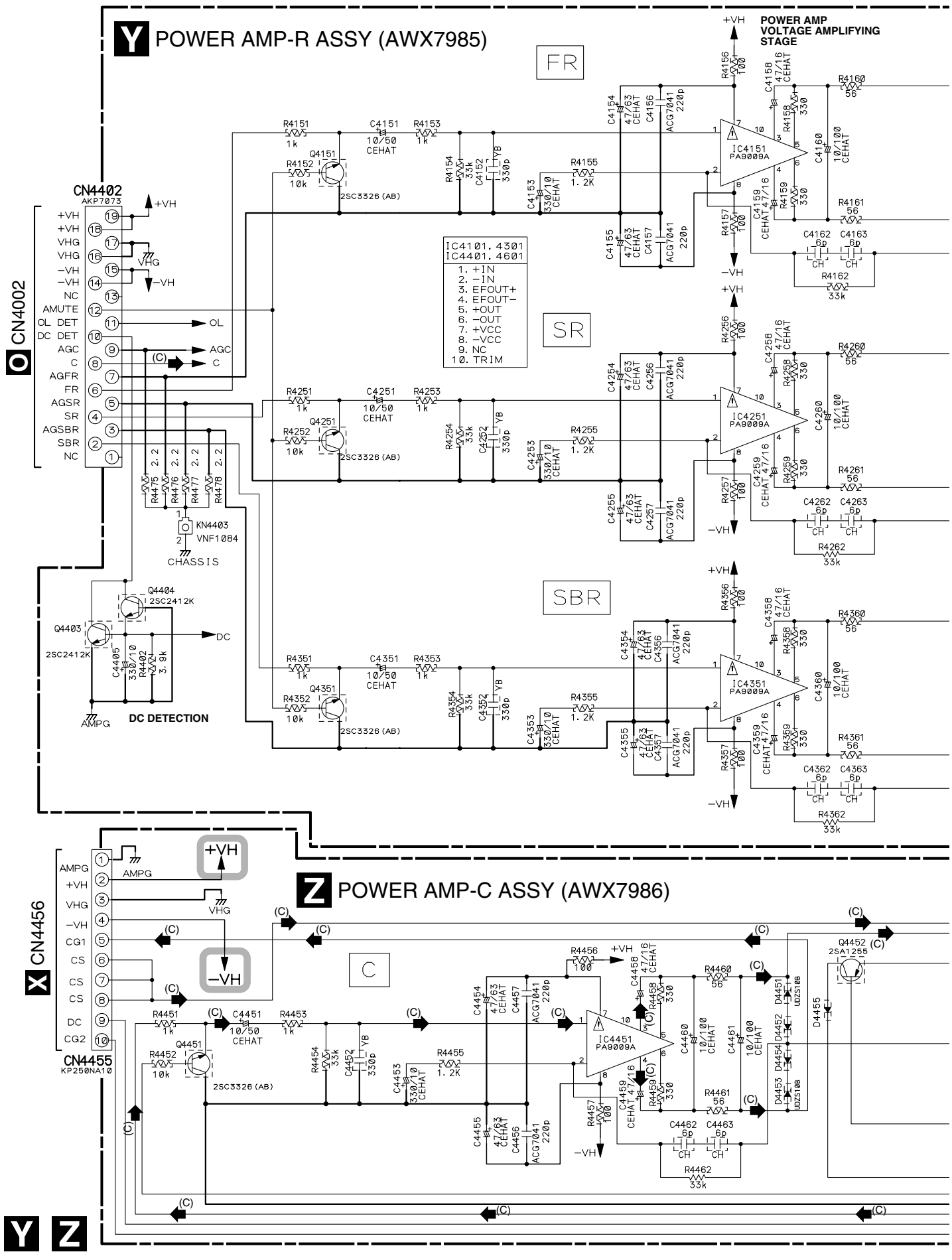
YA	CFTYA□□□J50−T		RS1/16S□□□J−T
LA	CFTLA□□□J2A−T	RDR	RDR1/4VM□□□J−T
CH	CCSRCH□□□J50−T	(MUF)	RD1/4MUF□□□J−T
YB	CKSRYB□□□K50−T	1W	RS1LMF□□□J
YF	CKSRYF□□□Z25−T	*	ACN7107(0.1Ω 1W)
	1SS355−TRB	F	NON−FRAMABLE

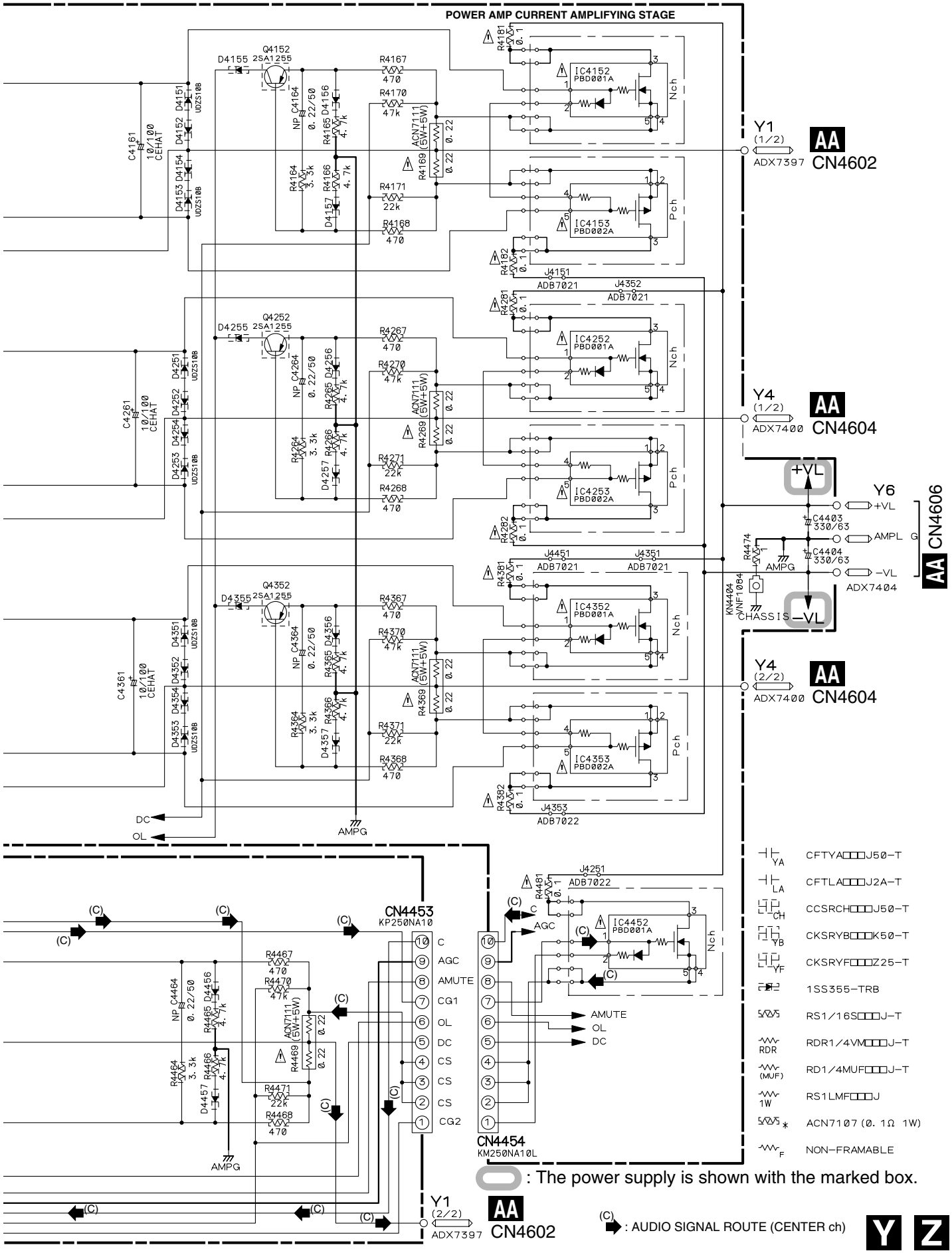
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)

: The power supply is shown with the marked box.

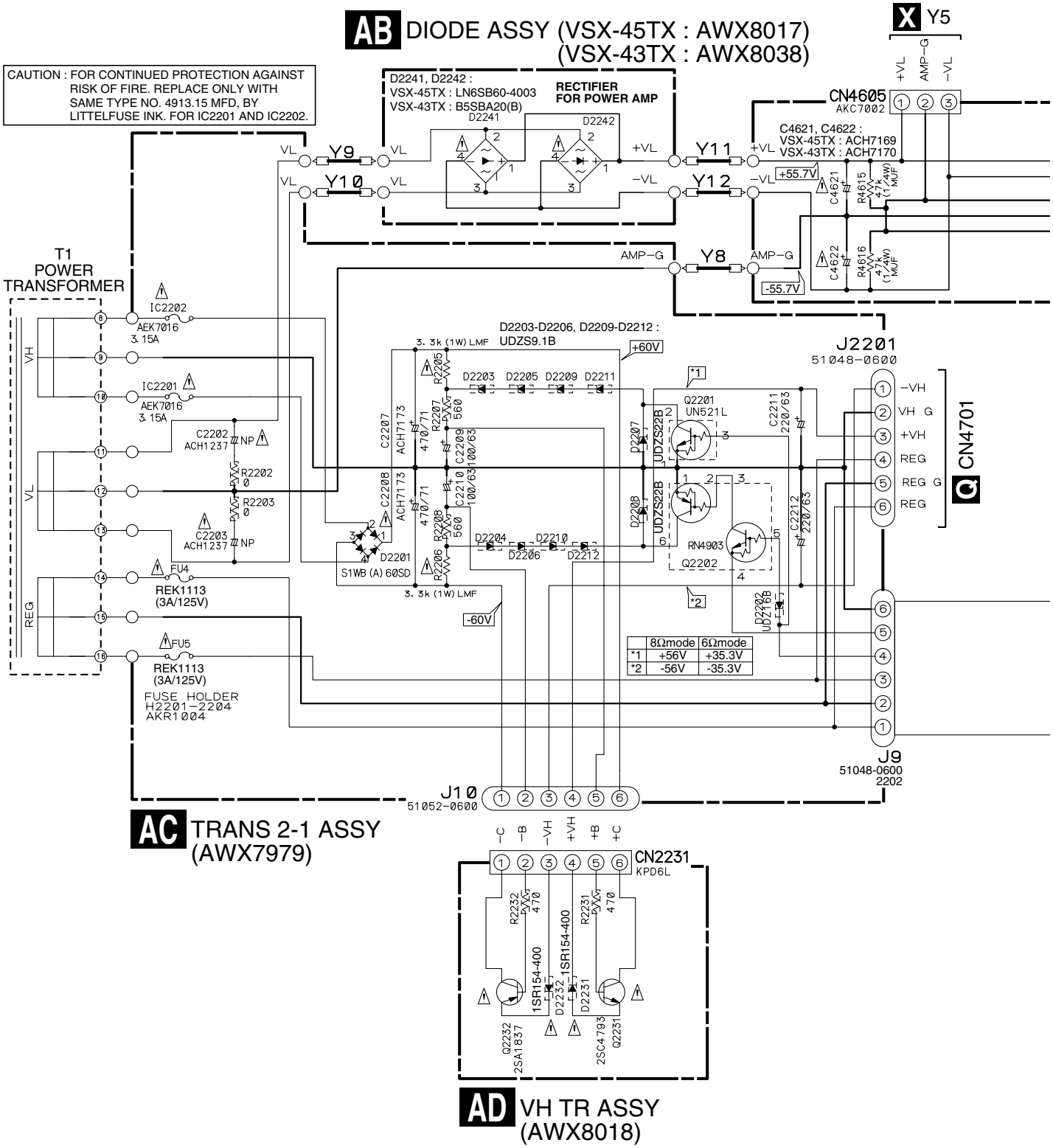


3.21 POWER AMP-R and POWER AMP-C ASSYS




POWER AMP CURRENT AMPLIFYING STAGE
Q4152 2SA1255
Q4252 2SA1255
Q4352 2SA1255
IC4152 PBD001A
IC4153 PBD002A
IC4252 PBD001A
IC4253 PBD002A
IC4352 PBD001A
IC4353 PBD002A
IC4452 PBD001A
Nch
Pch
J4151 ADB7021
J4352 ADB7021
J4451 ADB7021
J4351 ADB7021
J4353 ADB7022
J4251 ADB7022
Y1 (1/2) ADX7397 CN4602
Y4 (1/2) ADX7400 CN4604
Y4 (2/2) ADX7400 CN4604
Y1 (2/2) ADX7397 CN4602
Y6 ADX7404 CN4606
+VL
–VL
AMPL
AMPG
CHASSIS
DC
OL
AMUTE
CN4453 KP250NA10
CN4454 KM250NA10L
C
AGC
AMUTE
CG1
OL
DC
CS
CS
CS
CG2
: The power supply is shown with the marked box.
(C) : AUDIO SIGNAL ROUTE (CENTER ch)
CFTYA□□□J50–T
CFTLA□□□J2A–T
CCSRCH□□□J50–T
CKSRYB□□□K50–T
CKSRYF□□□Z25–T
1SS355–TRB
RS1/16S□□□J–T
RDR1/4VM□□□J–T
RD1/4MUF□□□J–T
RS1LMF□□□J
ACN7107 (0.1Ω 1W)
NON–FRAMABLE

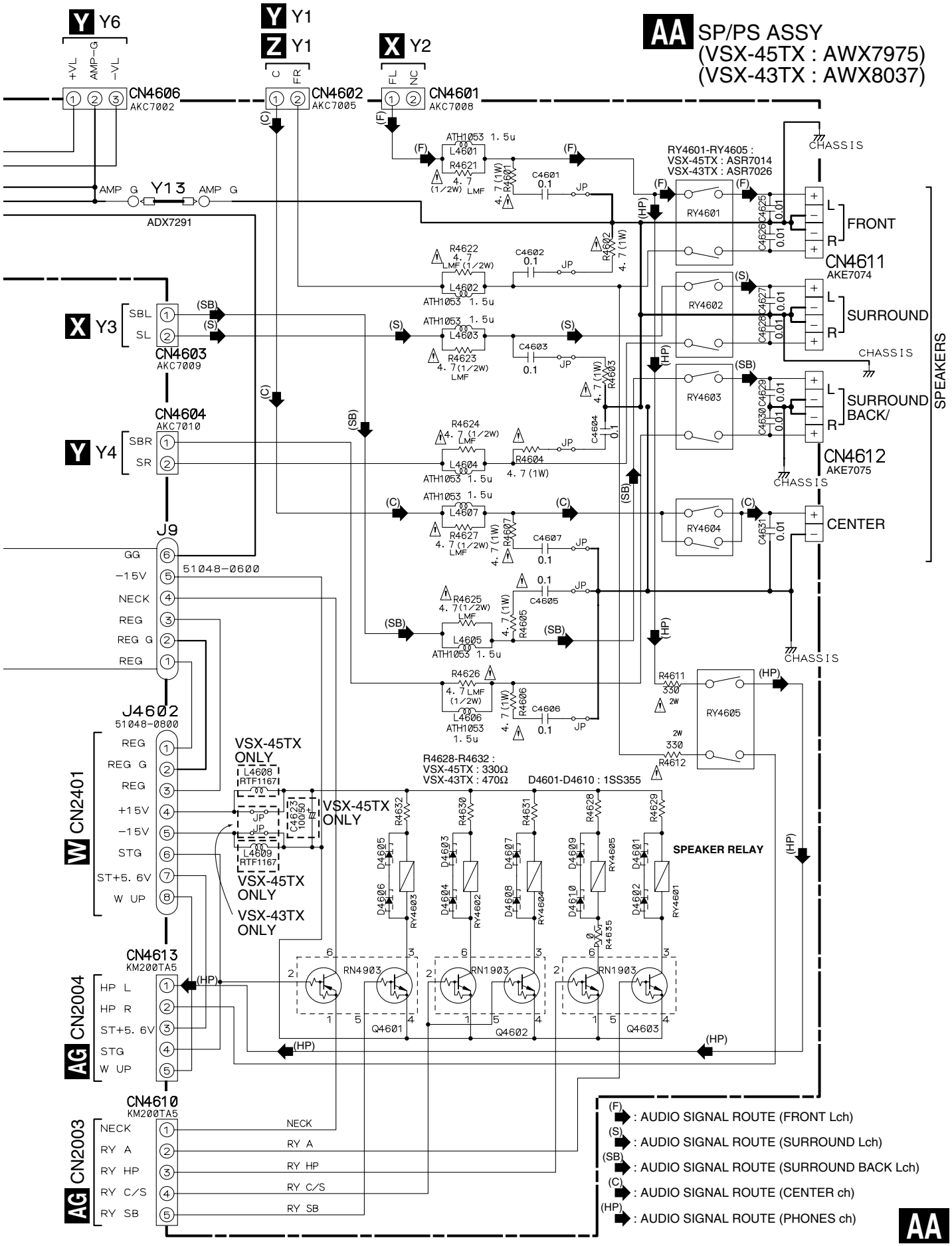
3.22 SP/PS, DIODE, TRANS 2-1 and VH TR ASSYS



• NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

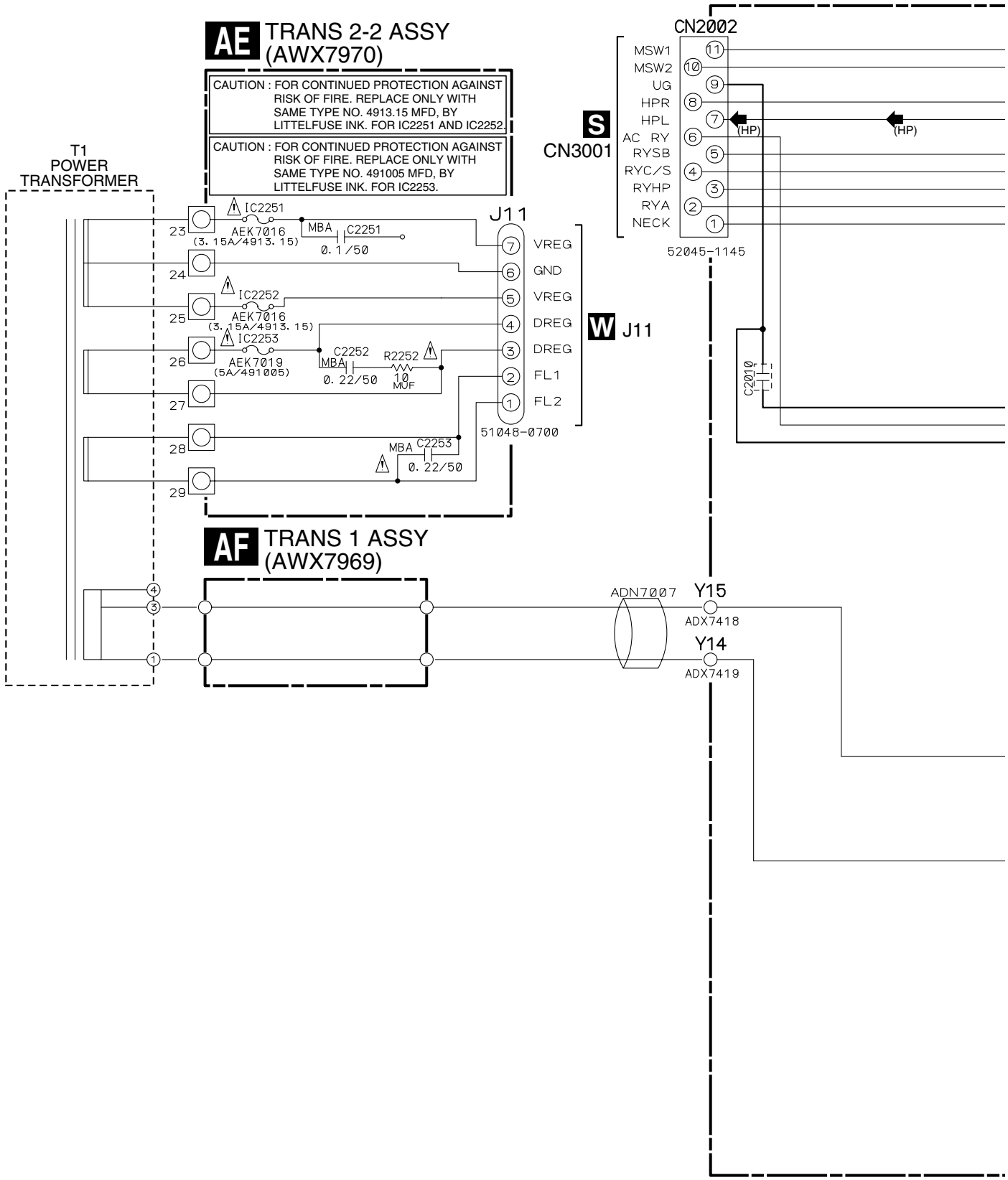
AA AB AC AD

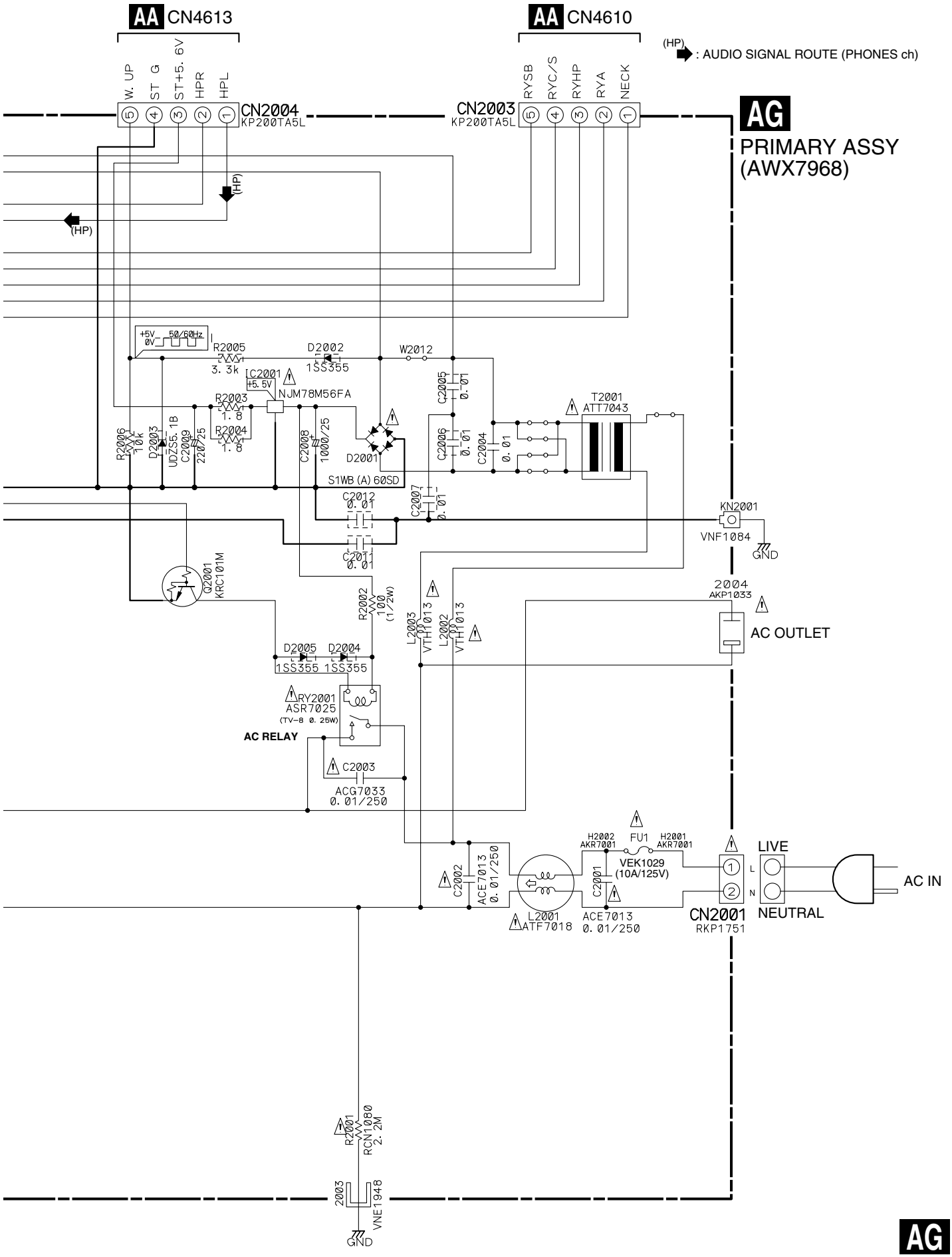

AA SP/PS ASSY
(VSX-45TX : AWX7975)
(VSX-43TX : AWX8037)
Y Y6
Y Y1
Z Y1
X Y2
CN4606 AKC7002
CN4602 AKC7005
CN4601 AKC7008
+VL
AMP-G
-VL
C
FR
FL
NC
AMP G
Y13
ADX7291
RY4601-RY4605 :
VSX-45TX : ASR7014
VSX-43TX : ASR7026
CHASSIS
RY4601
RY4602
RY4603
RY4604
RY4605
FRONT
SURROUND
SURROUND BACK/
CENTER
SPEAKERS
CN4611 AKE7074
CN4612 AKE7075
X Y3
SBL
SL
CN4603 AKC7009
CN4604 AKC7010
Y Y4
SBR
SR
J9
51048-0600
GG
-15V
NECK
REG
REG G
REG
J4602
51048-0800
W CN2401
+15V
STG
ST+5. 6V
W UP
VSX-45TX ONLY
VSX-43TX ONLY
R4628-R4632 :
VSX-45TX : 330Ω
VSX-43TX : 470Ω
D4601-D4610 : 1SS355
SPEAKER RELAY
CN4613 KM200TA5
AG CN2004
HP L
HP R
ST+5. 6V
STG
W UP
CN4610 KM200TA5
AG CN2003
NECK
RY A
RY HP
RY C/S
RY SB
RN4903
RN1903
Q4601
Q4602
Q4603
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)
(HP) : AUDIO SIGNAL ROUTE (PHONES ch)
AA

3.23 TRANS 2-2, TRANS 1 and PRIMARY ASSYS

• NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.



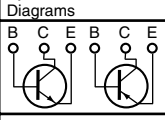
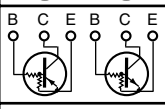
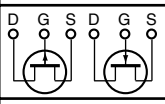
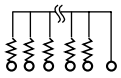

AA CN4613
W. UP
ST G
ST+5. 6V
HPR
HPL
CN2004
KP200TA5L
AA CN4610
RYSB
RYC/S
RYHP
RYA
NECK
CN2003
KP200TA5L
(HP) : AUDIO SIGNAL ROUTE (PHONES ch)
AG
PRIMARY ASSY
(AWX7968)
(HP)
(HP)
+5V 0V 50/60Hz
R2005 3. 3k
D2002 1SS355
W2012
C2001 +5. 5V
NJM78M56FA
R2003 1. 8
R2004 1. 8
R2006 10k
D2003 UDZS5. 1B
C2009 220/25
C2008 1000/25
D2001
S1WB (A) 60SD
C2005 0. 01
C2006 0. 01
C2004 0. 01
T2001 ATT7043
C2012 0. 01
C2007 0. 01
C2011 0. 01
KN2001
VNF1084
GND
Q2001 KRC101M
R2002 100 (1/2W)
L2003 VTH1013
L2002 VTH1013
2004 AKP1033
AC OUTLET
D2005 D2004
1SS355 1SS355
RY2001 ASR7025
(TV-8 0. 25W)
AC RELAY
C2003 ACG7033 0. 01/250
H2002 AKR7001
FU1 VEK1029 (10A/125V)
H2001 AKR7001
LIVE
NEUTRAL
AC IN
C2002 ACE7013 0. 01/250
L2001 ATF7018
C2001 ACE7013 0. 01/250
CN2001 RKP1751
R2001 RCN1080 2. 2M
2003 VNE1948
GND

AG

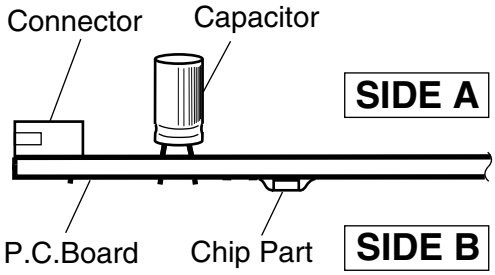
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

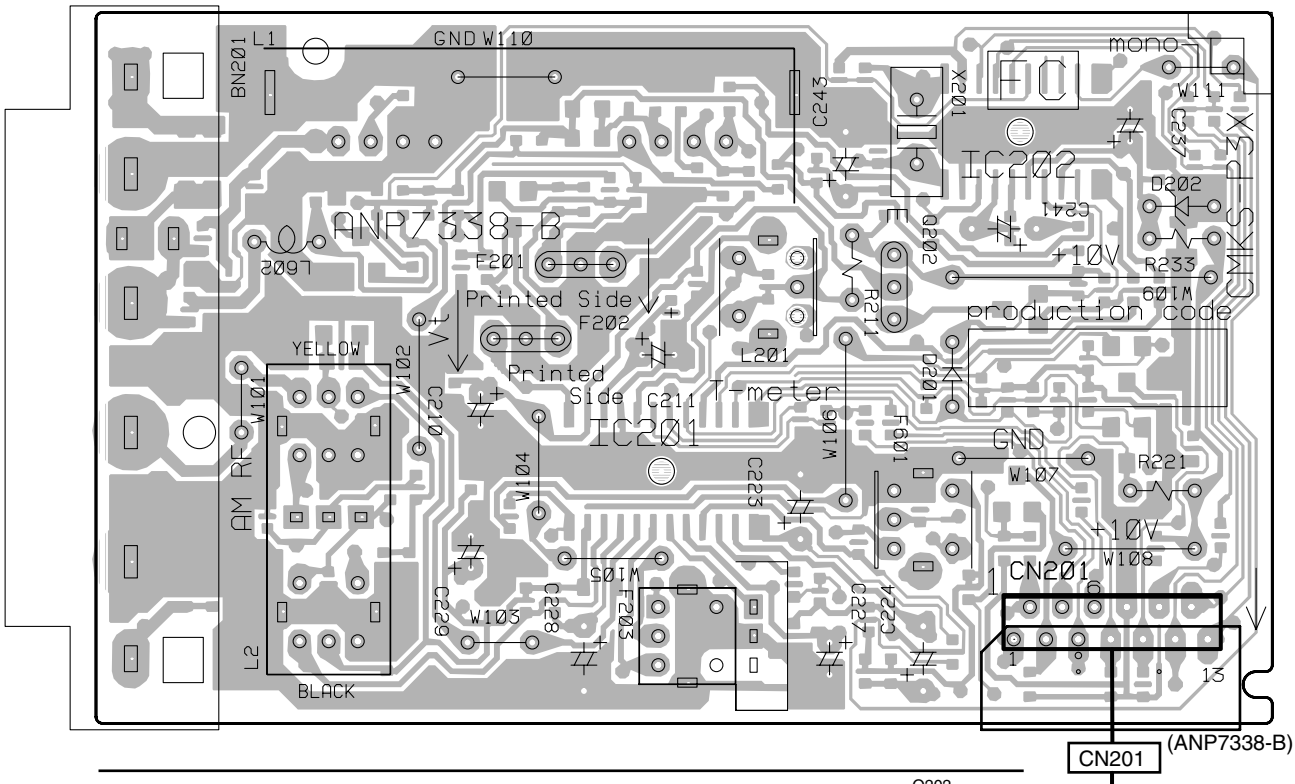
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 FM/AM TUNER MODULE

SIDE A

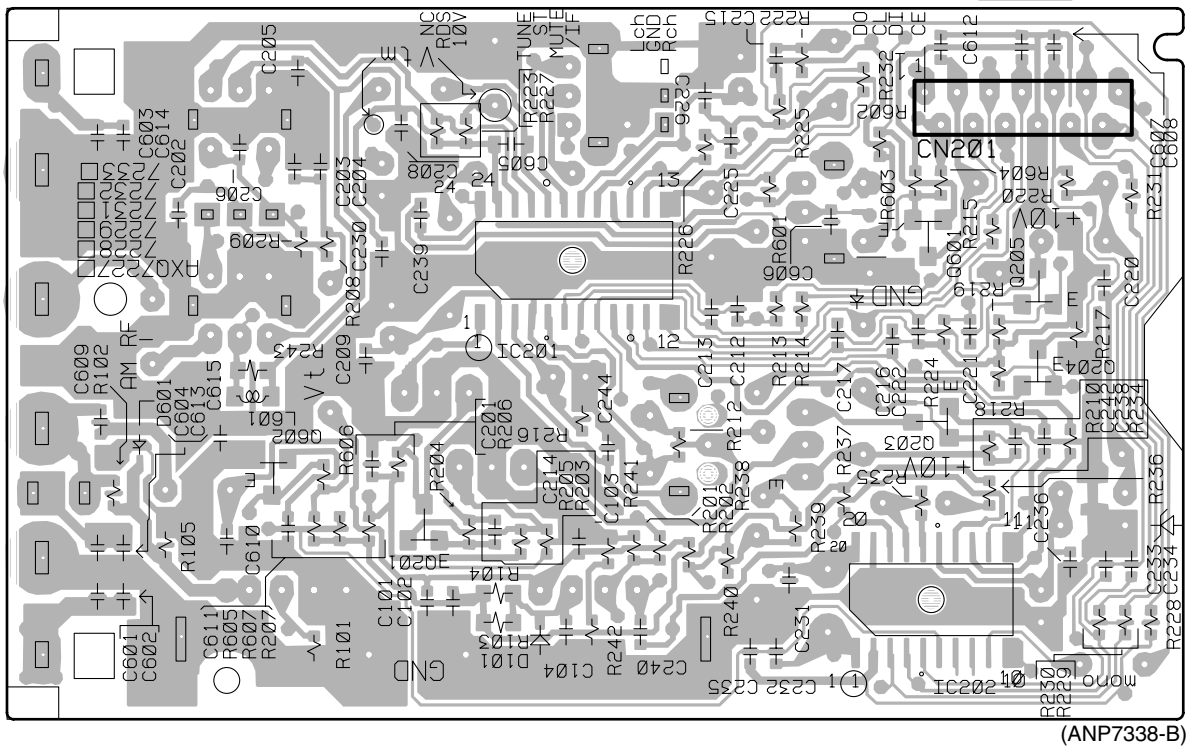
A FM/AM TUNER MODULE



K CN601

SIDE B

A FM/AM TUNER MODULE

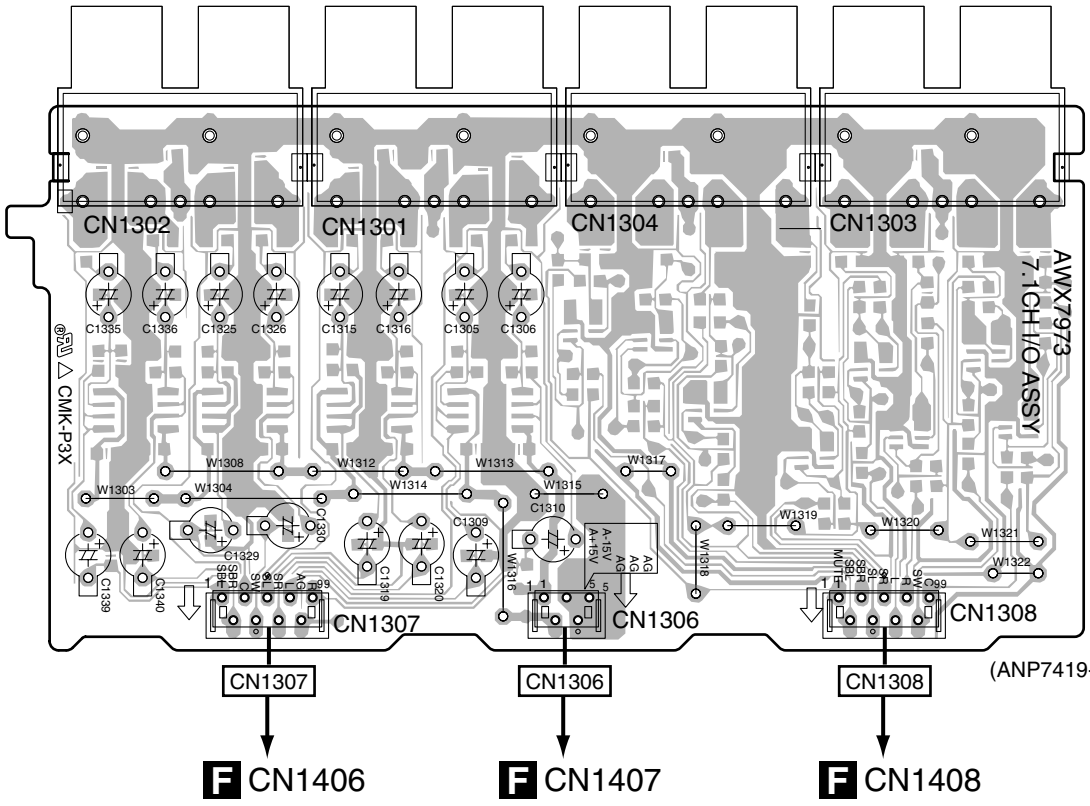


A

4.2 7.1CH I/O ASSY

SIDE A

B 7.1CH I/O ASSY



(ANP7419-B)

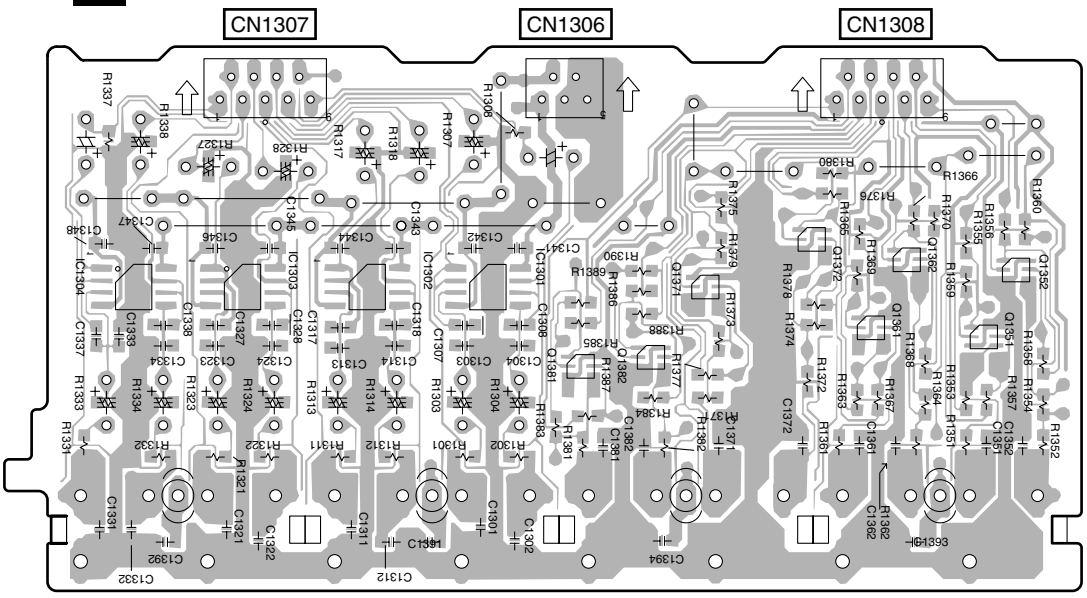
CN1307 → F CN1406

CN1306 → F CN1407

CN1308 → F CN1408

SIDE B

B 7.1CH I/O ASSY



(ANP7419-B)

IC1304 IC1303 IC1302 IC1301 Q1381 Q1382 Q1371 Q1372 Q1361 Q1362 Q1351 Q1352

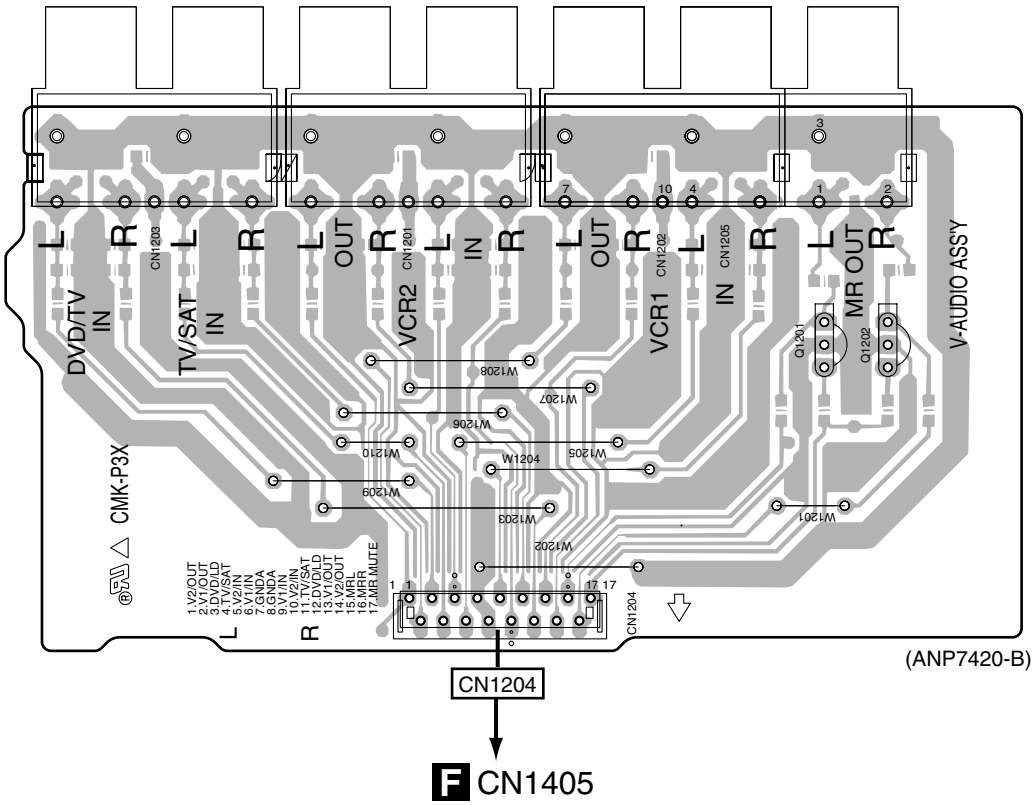
B

4.3 V-AUDIO IN ASSY

SIDE A

SIDE A

C V-AUDIO IN ASSY



Q1201
Q1202

(ANP7420-B)

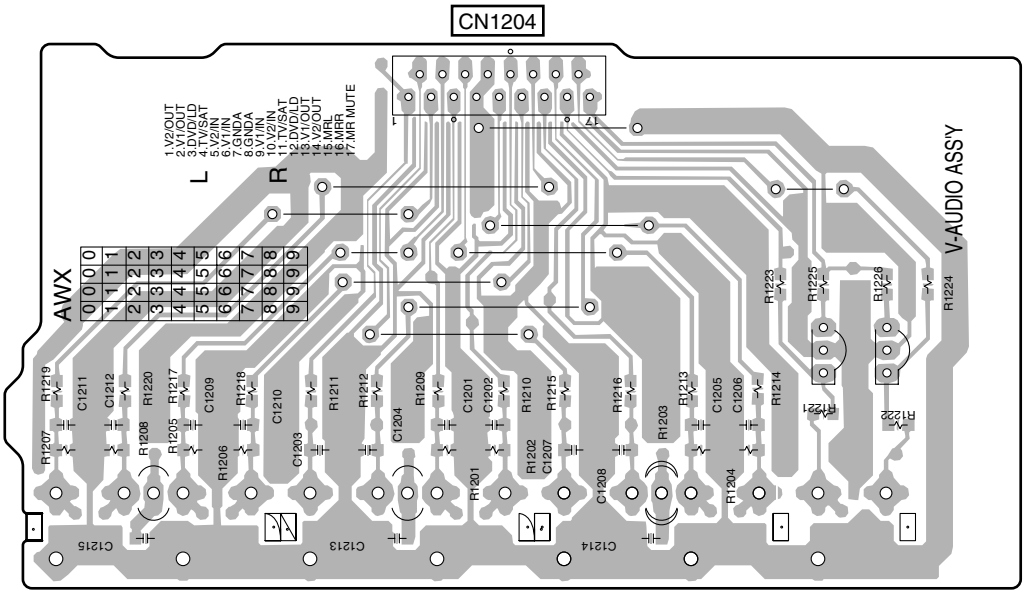
CN1204

F CN1405

SIDE B

SIDE B

C V-AUDIO IN ASSY



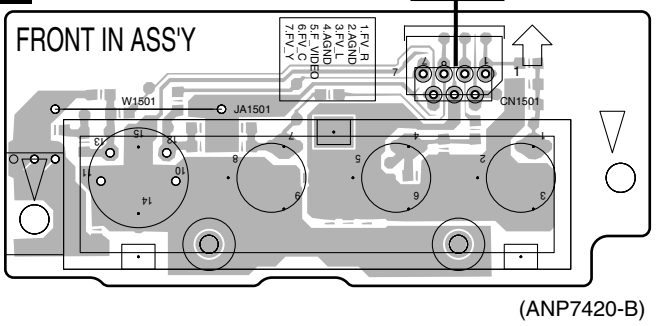
(ANP7420-B)

4.4 FRONT IN, OPTICAL IN and INPUT CONNECT ASSYS

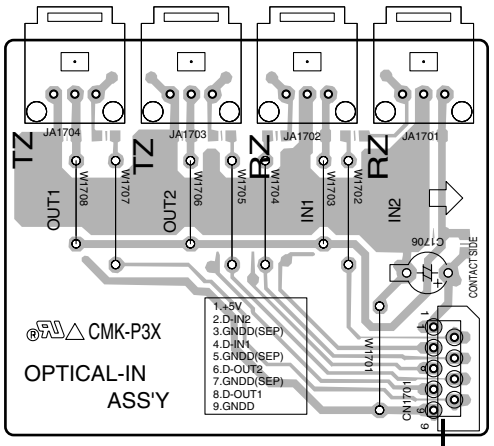
SIDE A

S CN3005

D FRONT IN ASSY



E OPTICAL IN ASSY



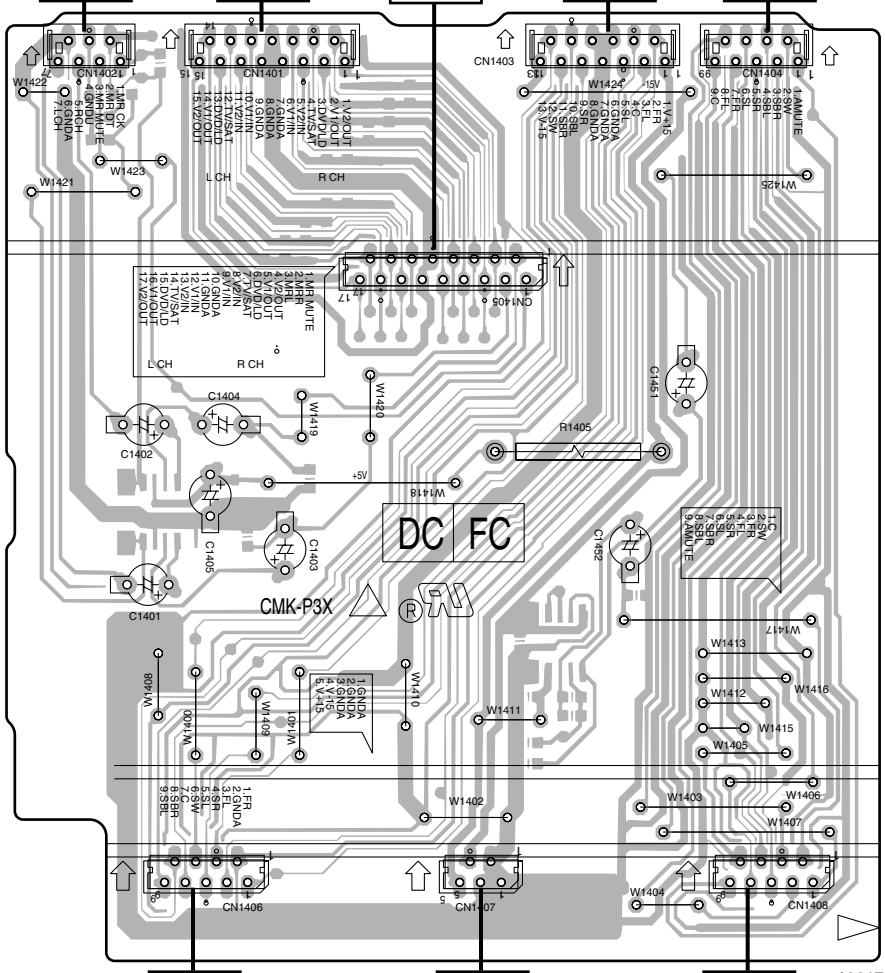
CN1701

G CN1801

F INPUT CONNECT ASSY

K CN201 **K** CN101 **C** CN1204 **K** CN102 **K** CN103

CN1402 CN1401 CN1405 CN1403 CN1404



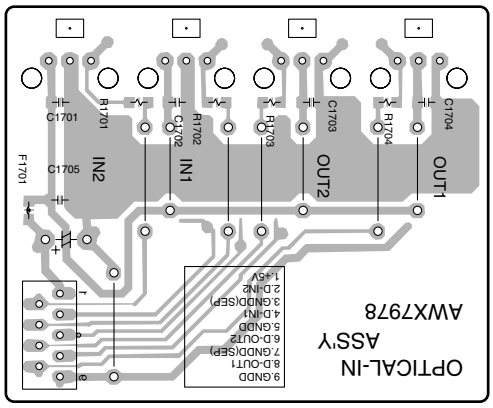
CN1406 CN1407 CN1408

B CN1307 **B** CN1306 **B** CN1308

D E F

SIDE B

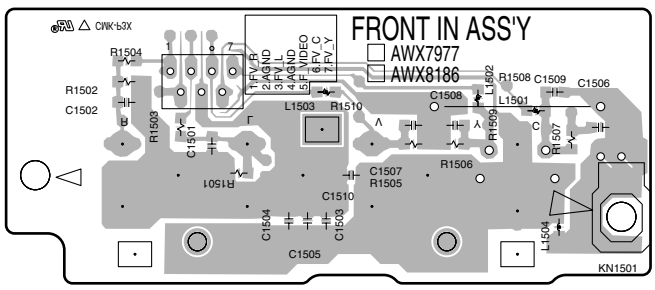
E OPTICAL IN ASSY



CN1701 (ANP7420-B)

D FRONT IN ASSY

CN1501

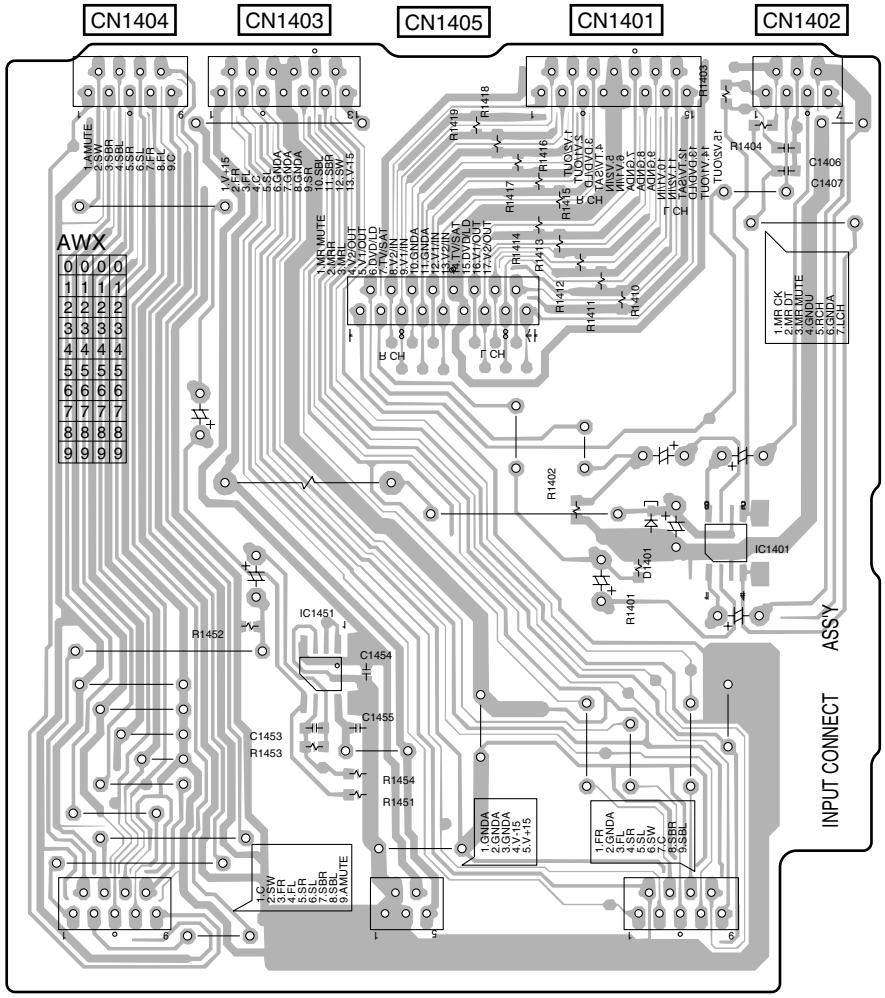


(ANP7420-B)

1801

F INPUT CONNECT ASSY

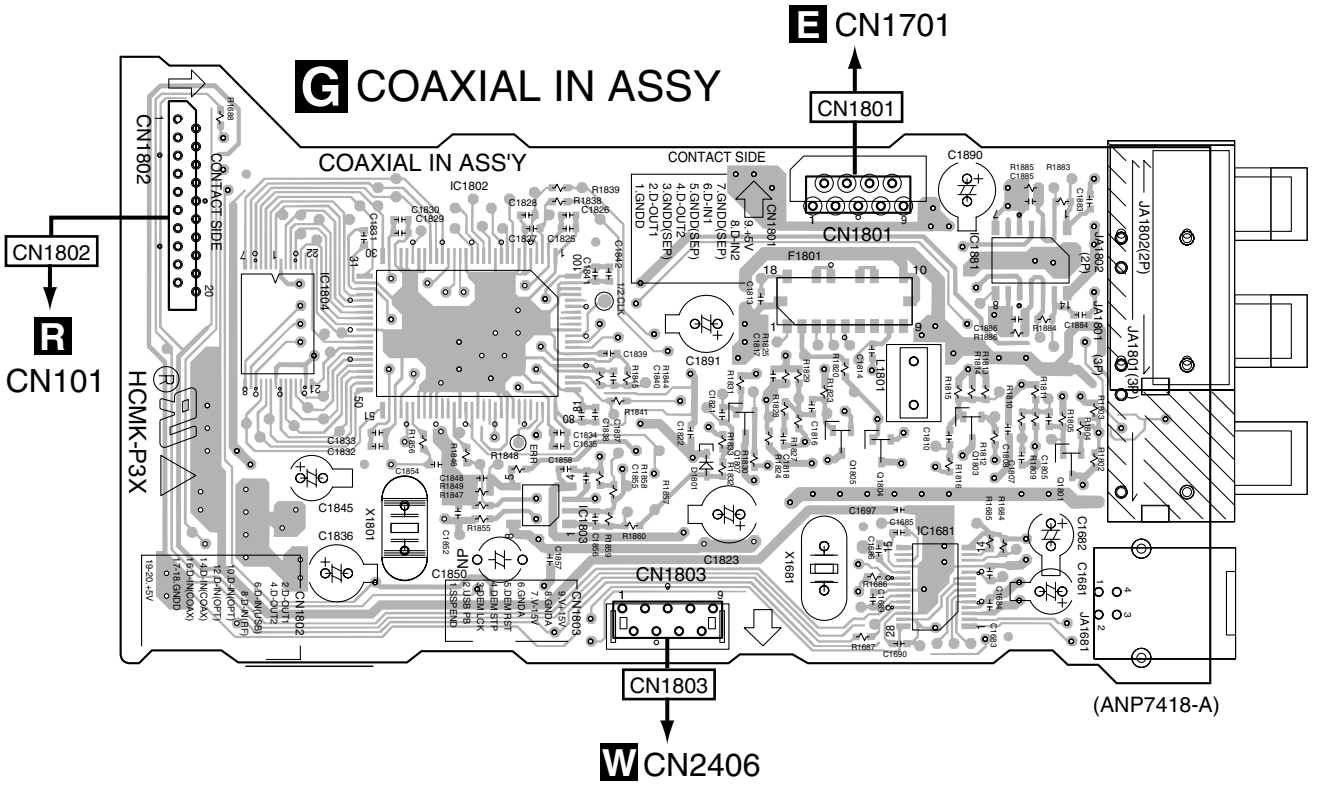
CN1404 CN1403 CN1405 CN1401 CN1402



CN1408 CN1407 CN1406 (ANP7420-B)

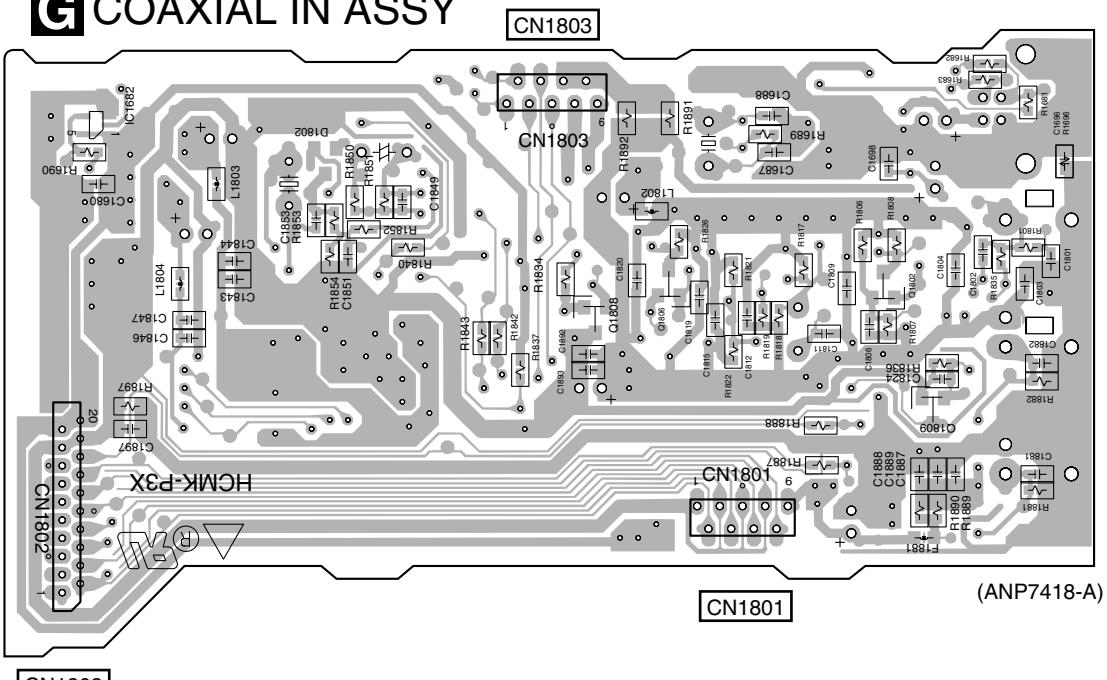
4.5 COAXIAL IN ASSY

SIDE A



IC1804 IC1802 IC1803 IC1881 Q1807 Q1805 Q1804 Q1804 Q1801 IC1681

SIDE B



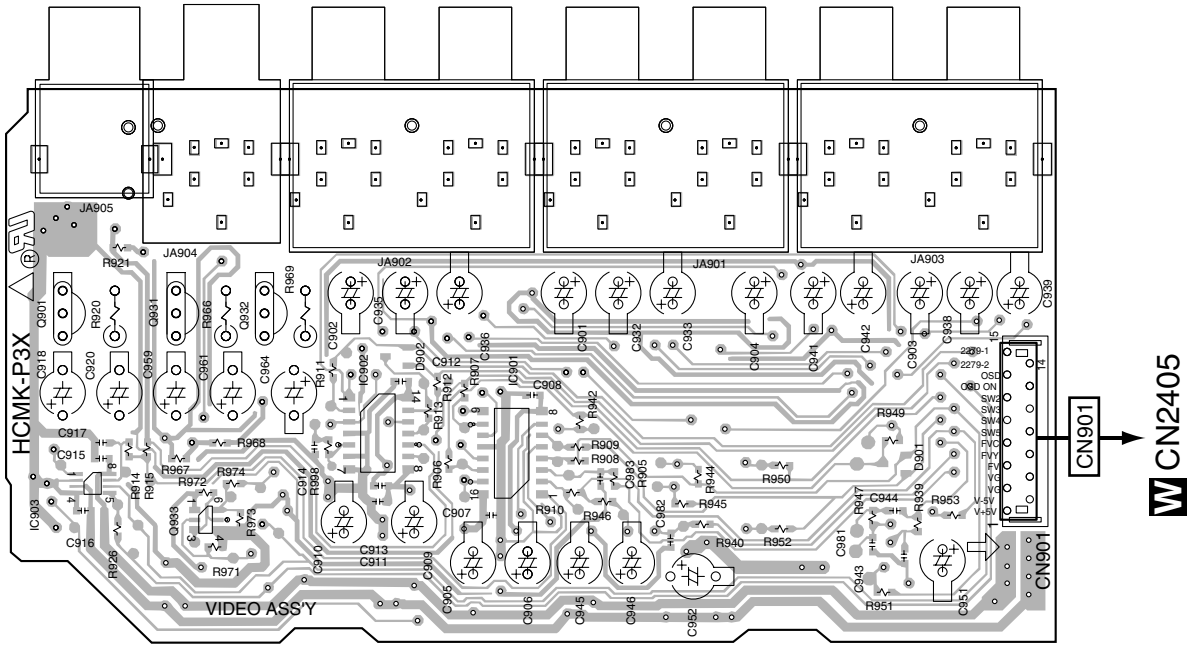
IC1682 Q1808 Q1806 Q1802 Q1809

G

4.6 VIDEO ASSY

SIDE A **SIDE A**

H VIDEO ASSY

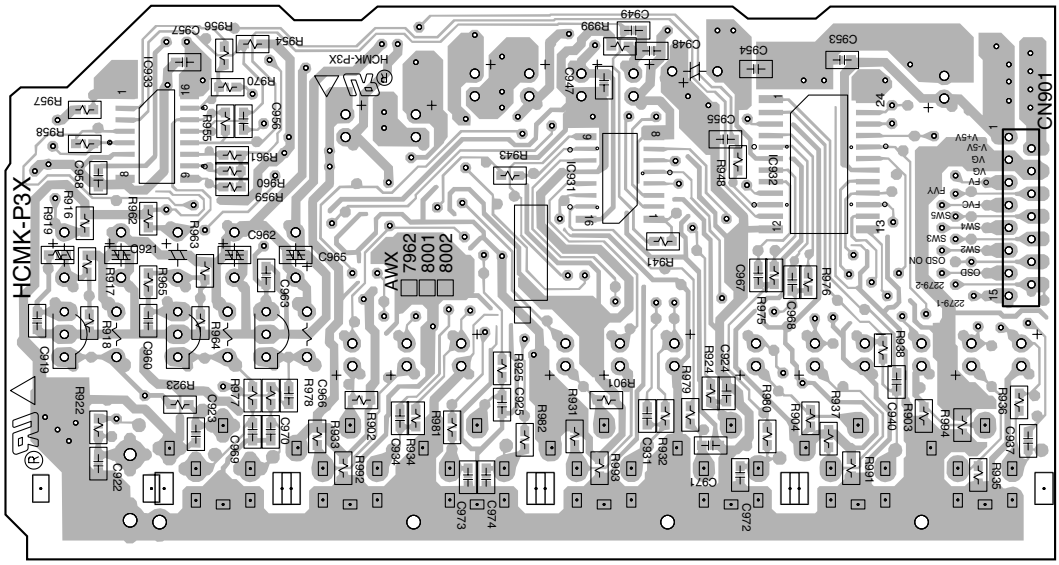


(ANP7418-A)

Q901 Q931 Q932 IC902 IC901
IC903 Q933

SIDE B **SIDE B**

H VIDEO ASSY

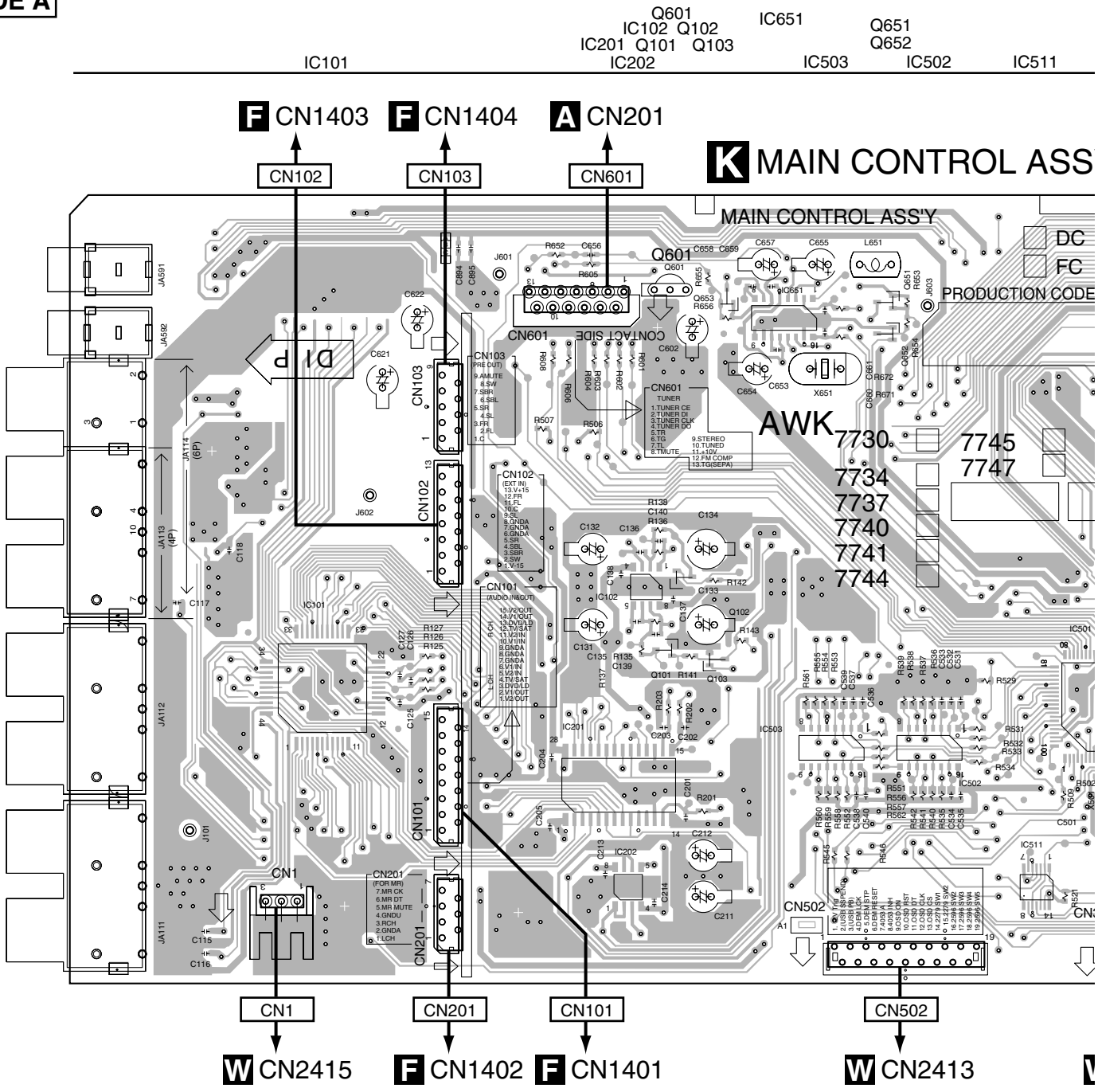


(ANP7418-A)

IC933 IC931 IC932

4.7 MAIN CONTROL and RS232C ASSYS

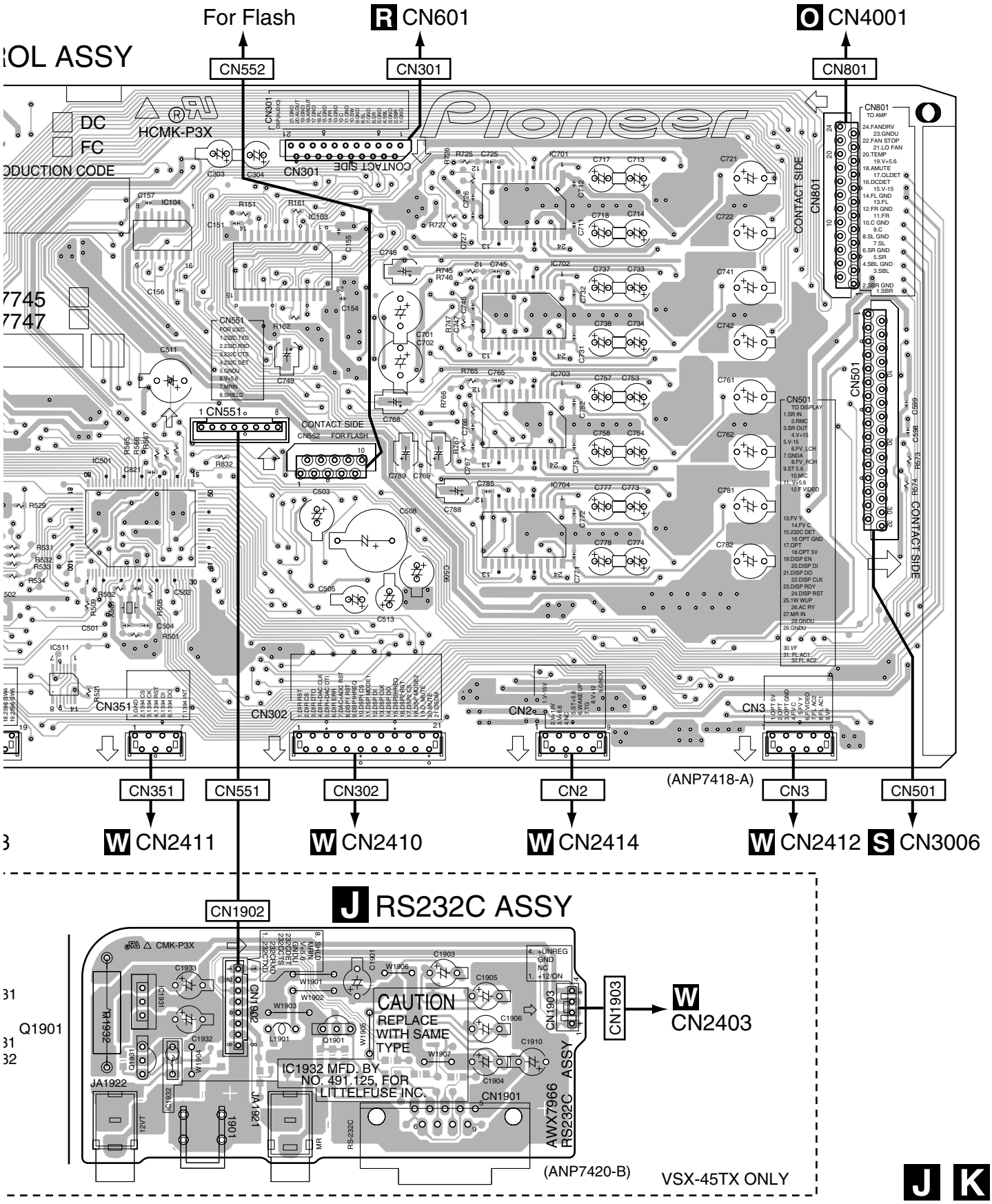
SIDE A



J K

SIDE A

IC511 IC501 IC104 IC103 IC702 IC704 IC701 IC703



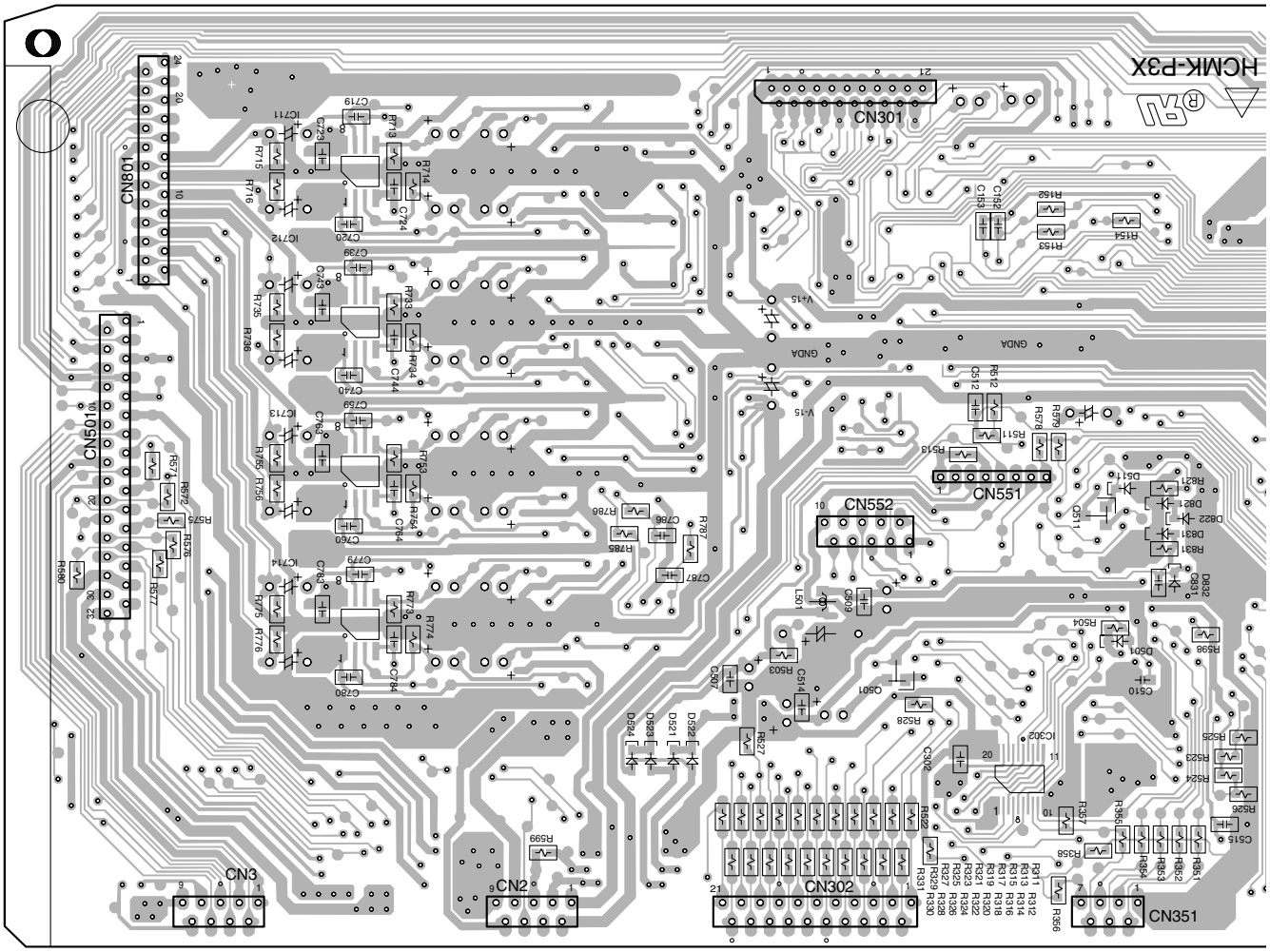
SIDE B

IC711
IC712
IC713
IC714

Q501 IC302 Q511

K MAIN CONTROL ASSY

CN301

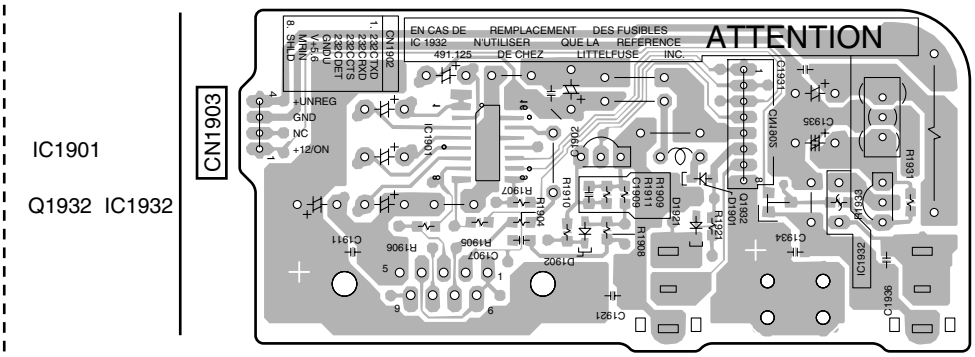


CN3 CN2 CN552 CN551 CN351

CN302

J RS232C ASSY

CN1902



VSX-45TX ONLY

(ANP7420-B)

J K

SIDE B

A

B

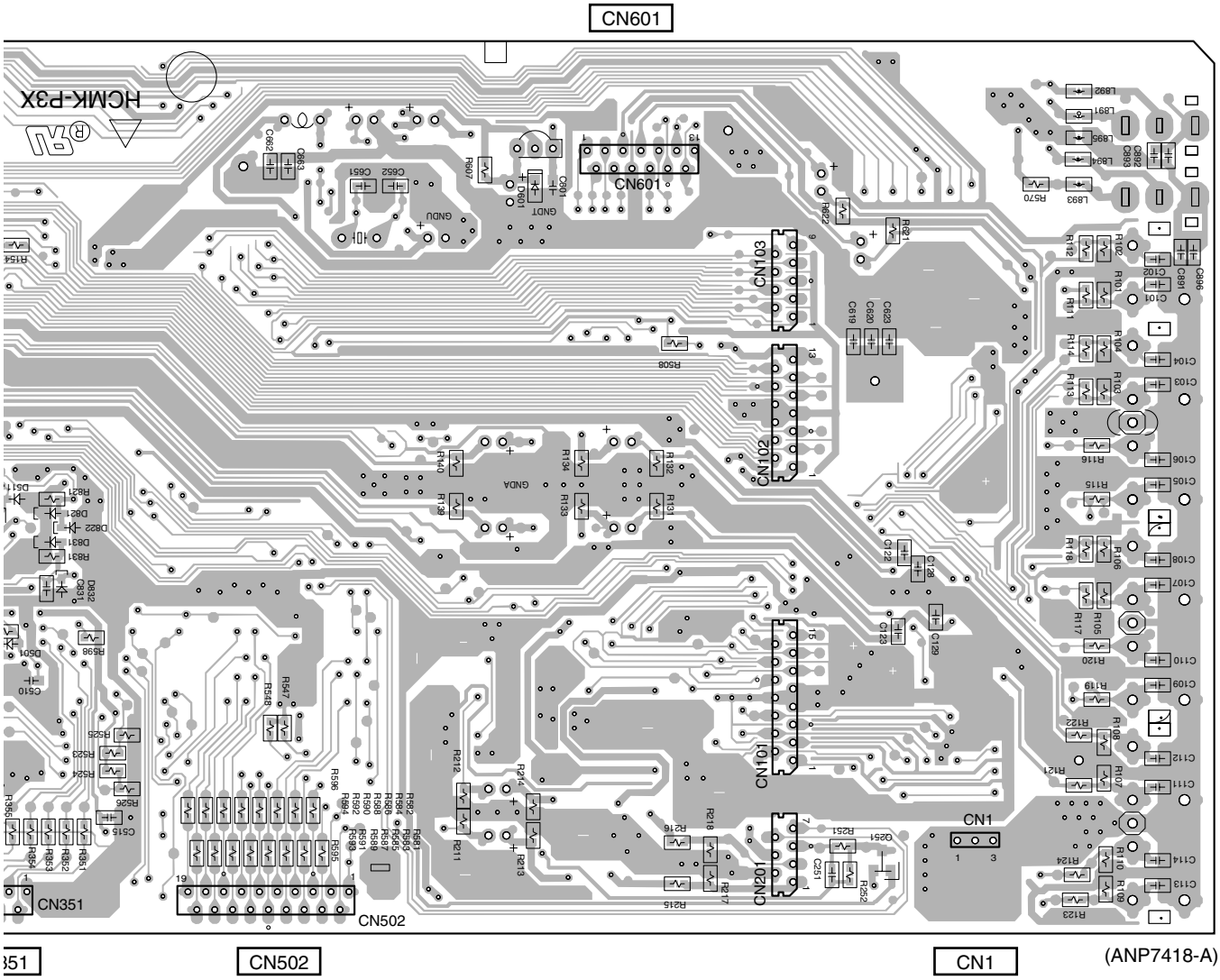
C

D

E

F

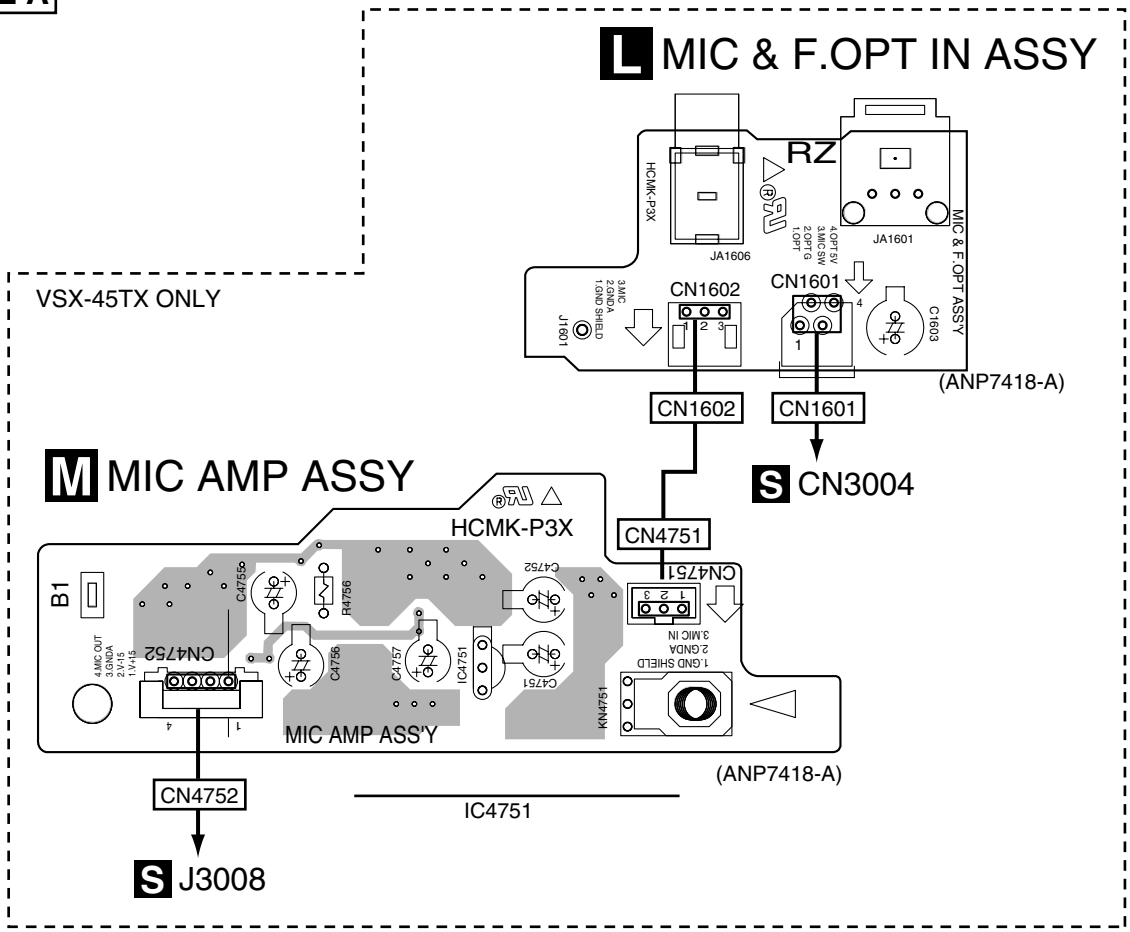
1 Q601 Q251

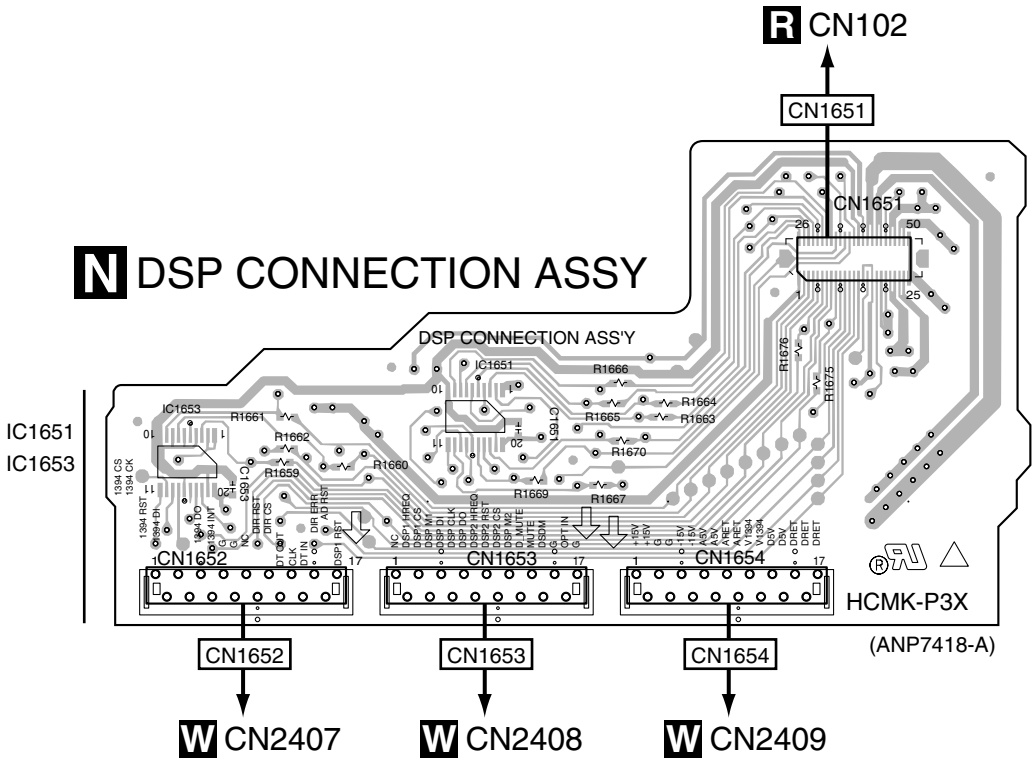


(20-B)

4.8 MIC & F. OPT IN, MIC AMP and DSP CONNECTION ASSYS

SIDE A

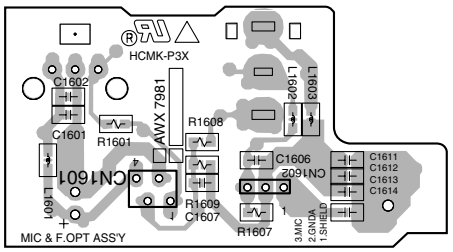




L M N

SIDE B

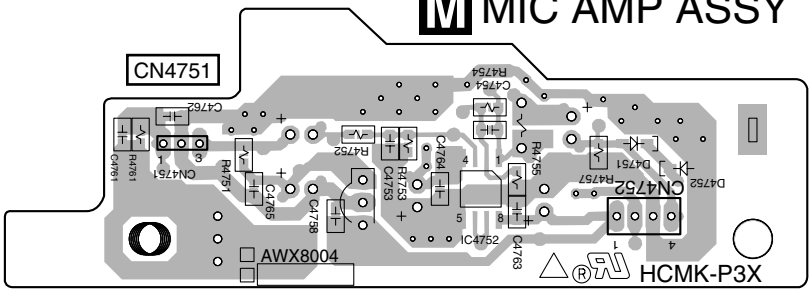
L MIC & F.OPT IN ASSY



CN1601 CN1602 (ANP7418-A)

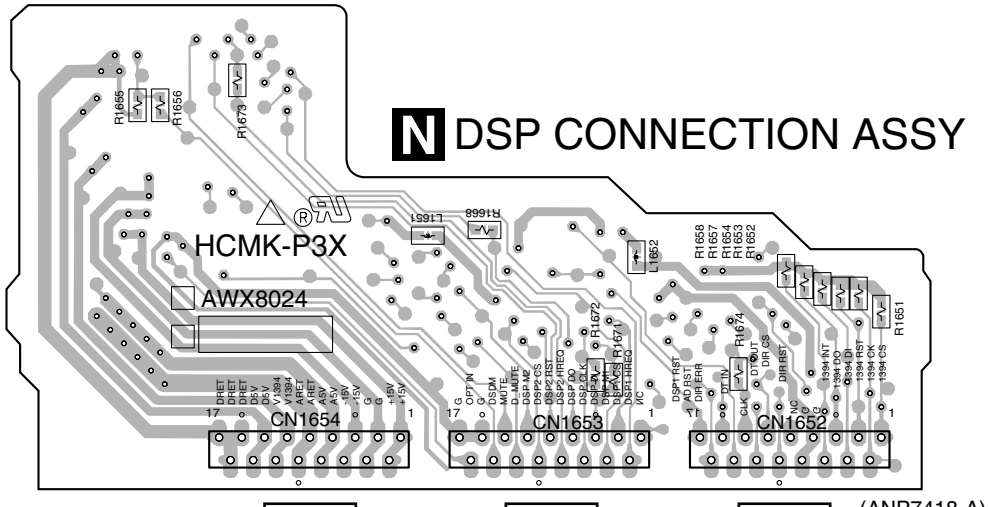
VSX-45TX ONLY

M MIC AMP ASSY



CN4752 (ANP7418-A)

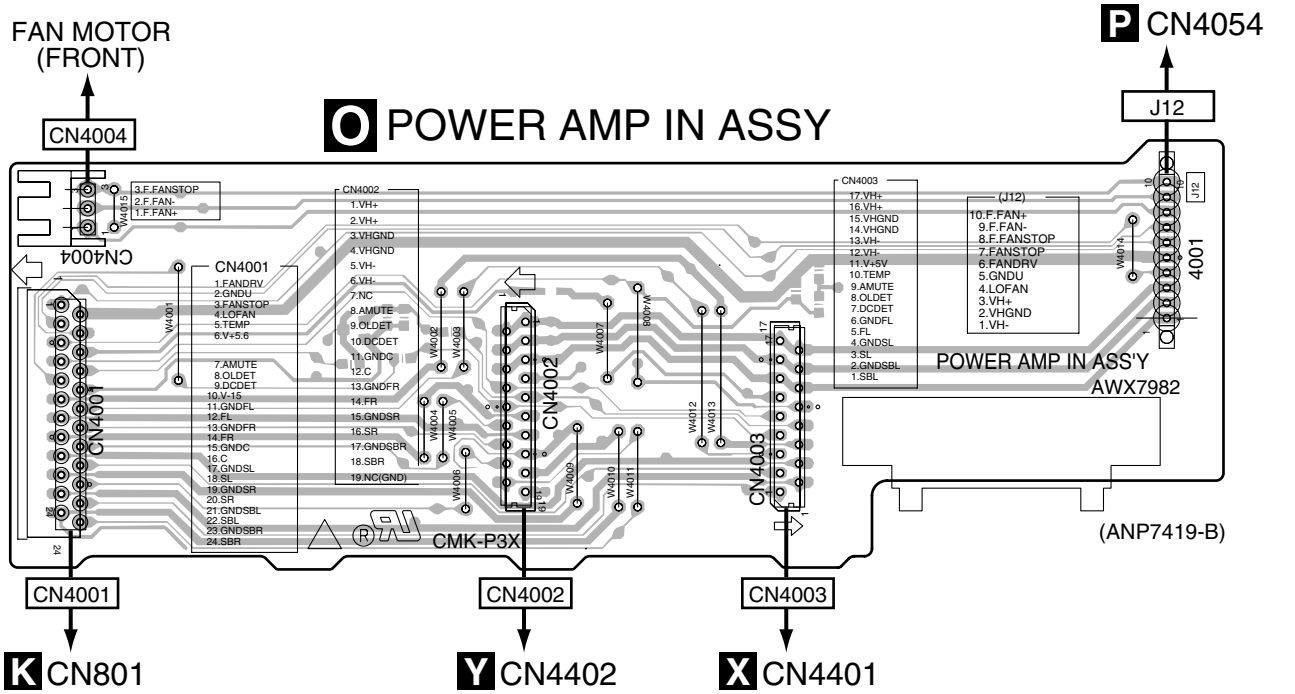
N DSP CONNECTION ASSY

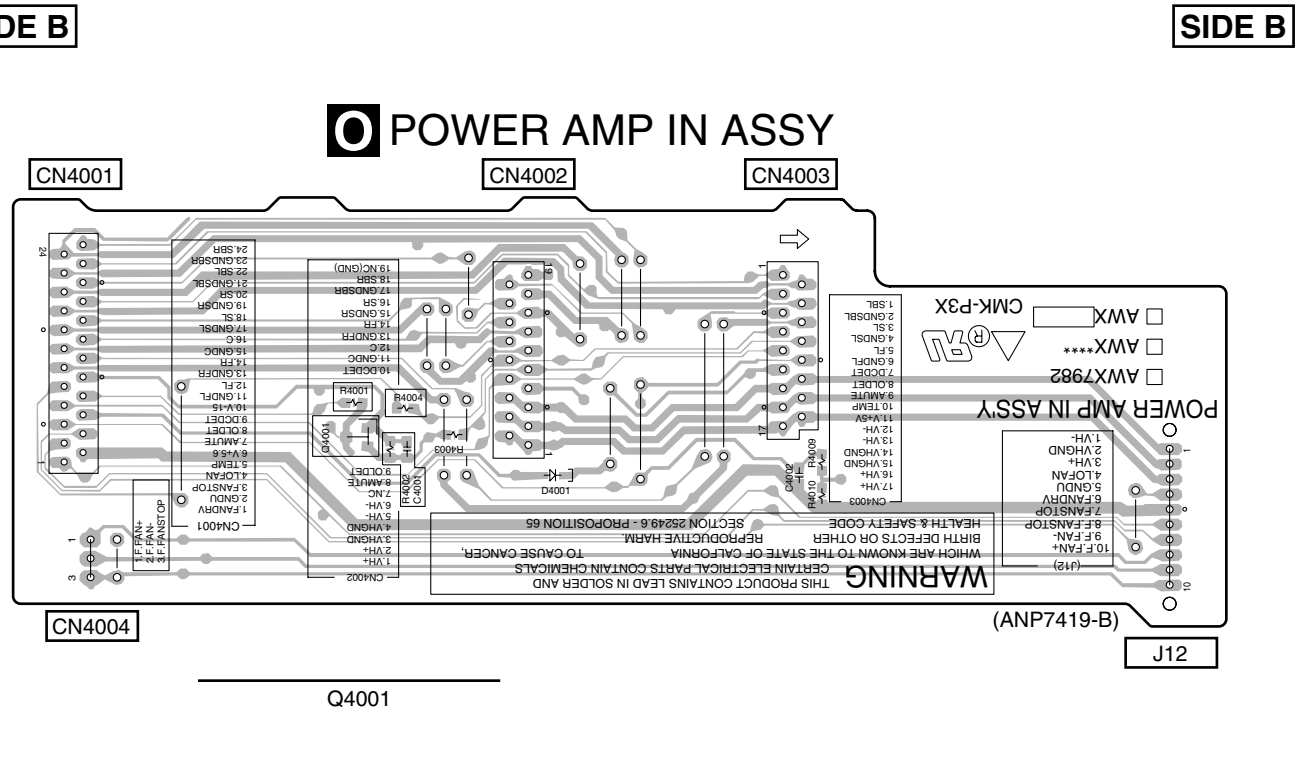


CN1654 CN1653 CN1652 (ANP7418-A)

L M N

4.9 POWER AMP IN ASSY



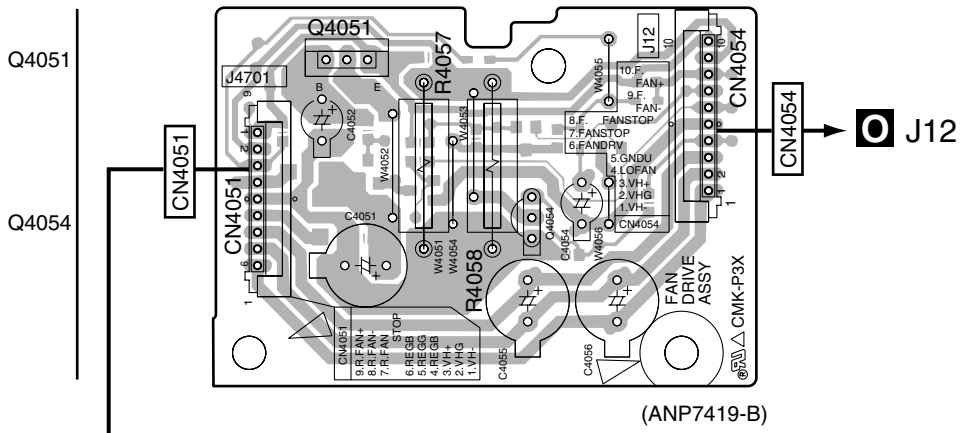


4.10 FAN DRIVE and FAN CONNECTION ASSYS

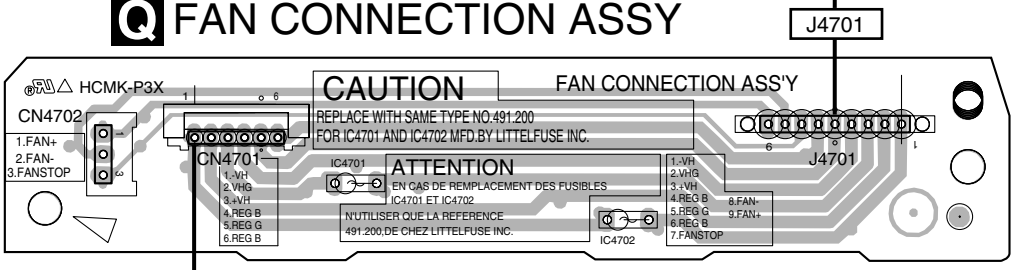
SIDE A

SIDE A

P FAN DRIVE ASSY



Q FAN CONNECTION ASSY



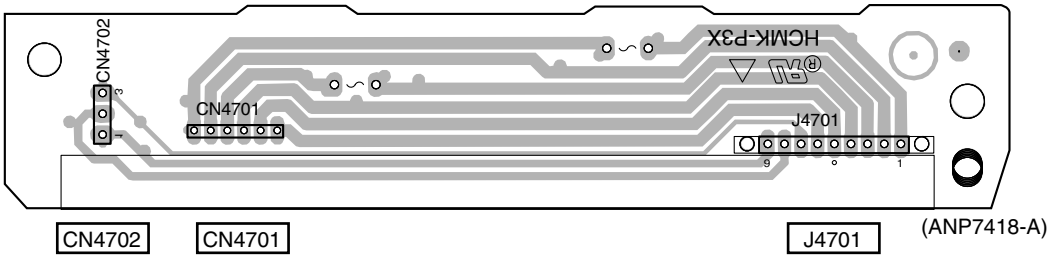
CN4702 CN4701 IC4701 IC4702

AC J2201

SIDE B

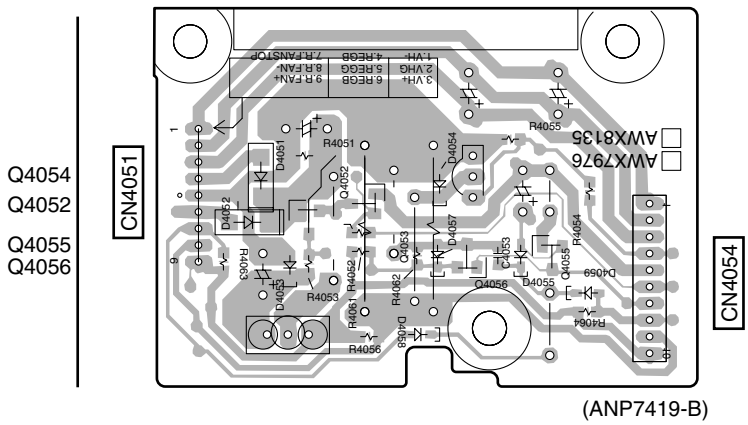
SIDE B

Q FAN CONNECTION ASSY



CN4702 CN4701 J4701

P FAN DRIVE ASSY

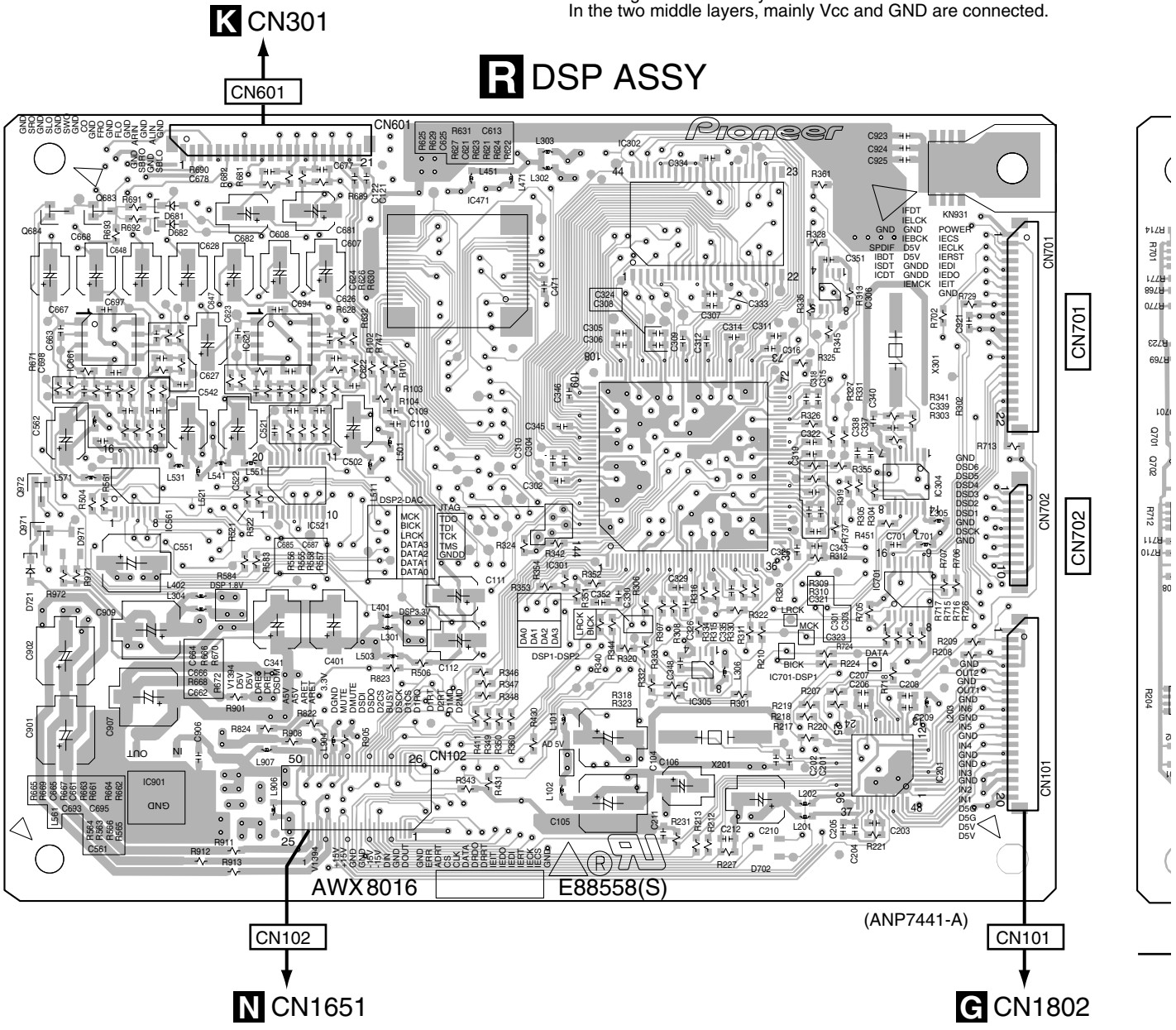


P Q

4.11 DSP ASSY

SIDE A

- This diagram has four layers.
  In the two middle layers, mainly Vcc and GND are connected.

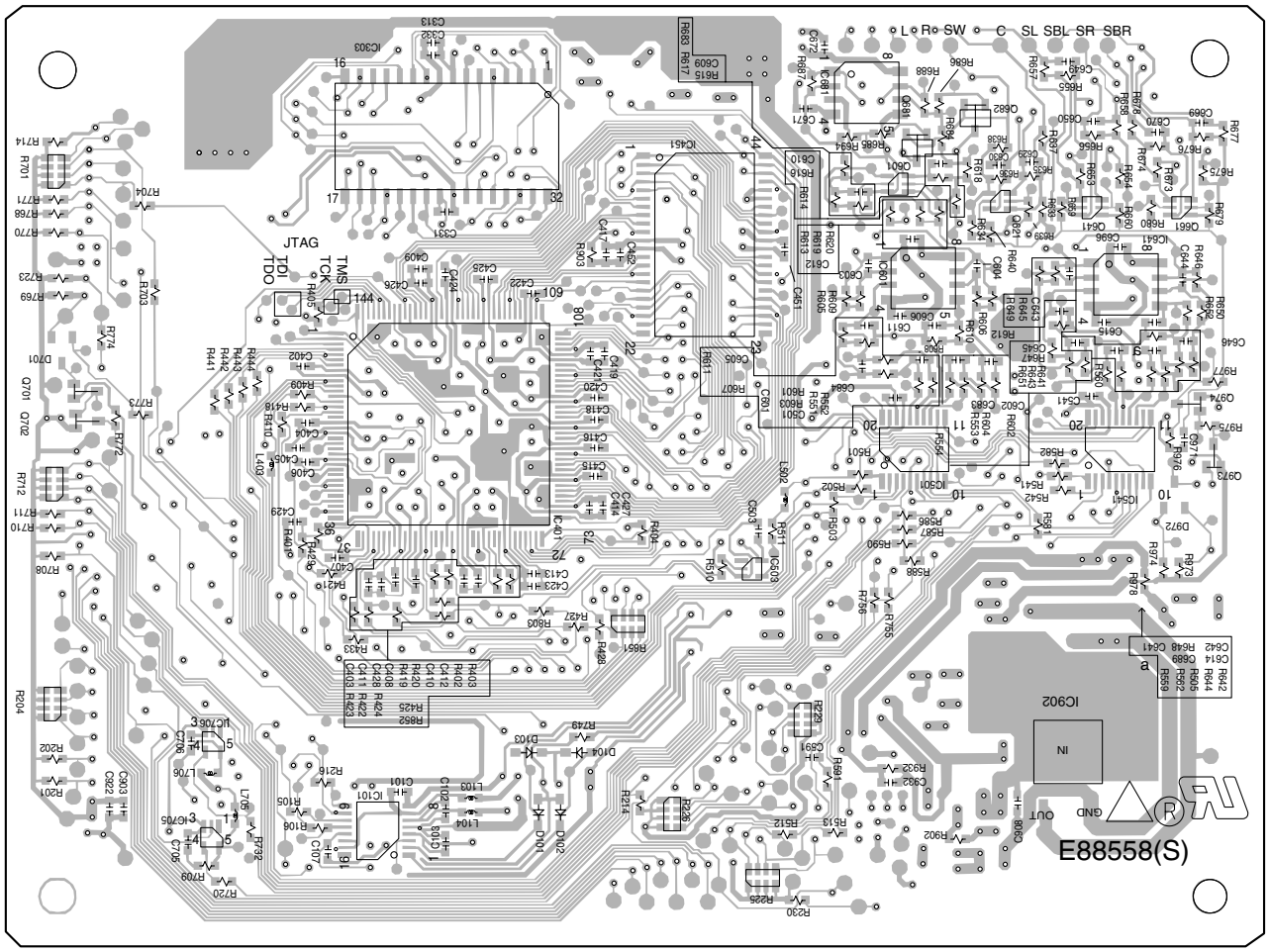


Q972 IC661 IC621 IC471 IC302 IC306
Q971 IC561 IC521 IC301 IC304
IC901 IC305 IC701
IC201

SIDE B

- This diagram has four layers.
  In the two middle layers, mainly Vcc and GND are connected.

R DSP ASSY

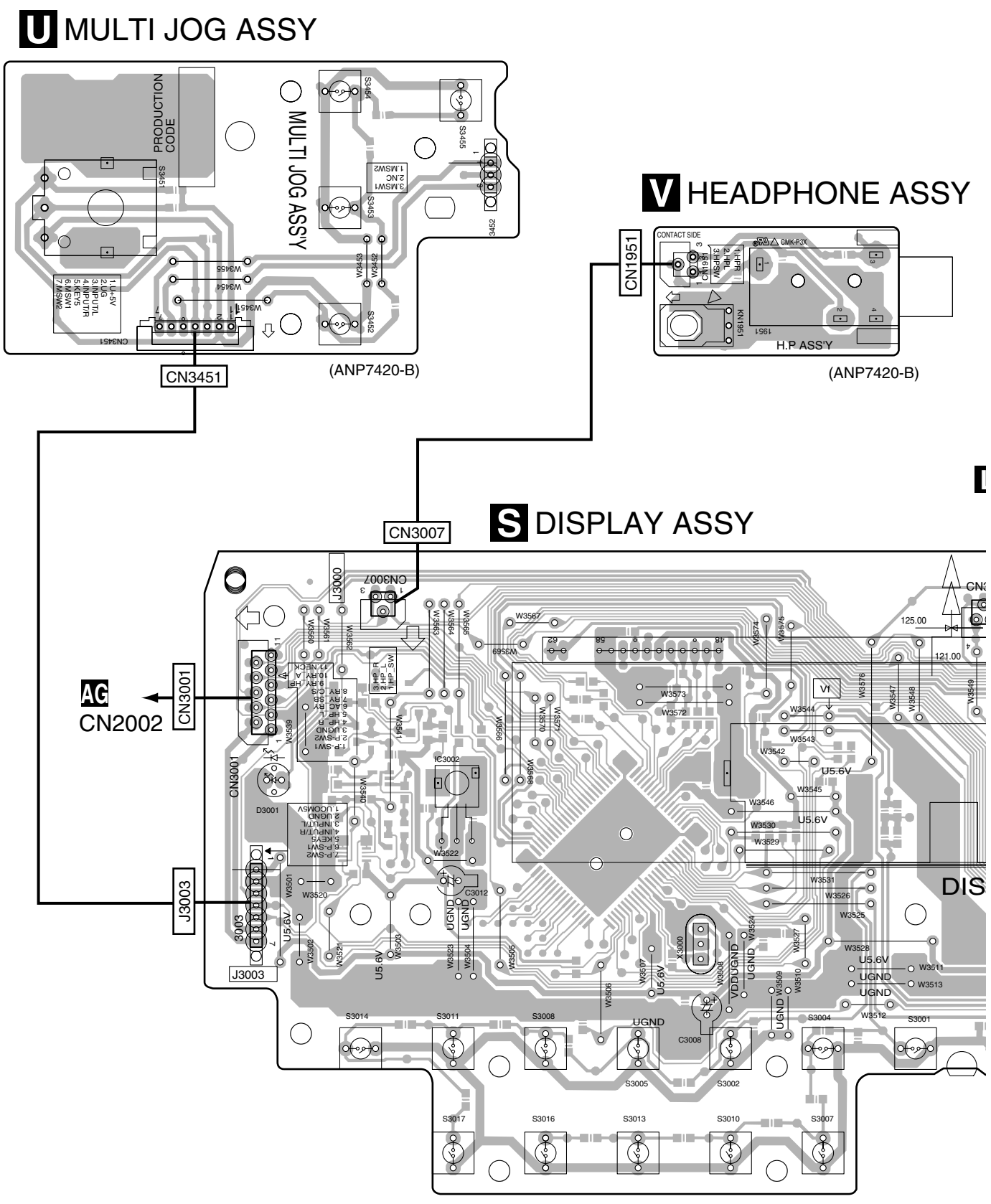


(ANP7441-A)

Q701 Q702 IC706 IC705 IC101 IC303 IC401 IC451 IC681 Q682 Q681 Q601 Q621 Q641 Q661 IC601 IC611 Q974 IC503 IC501 IC902 IC541 Q973

4.12 DISPLAY, VOLUME, MULTI JOG and HEADPHONE ASSYS

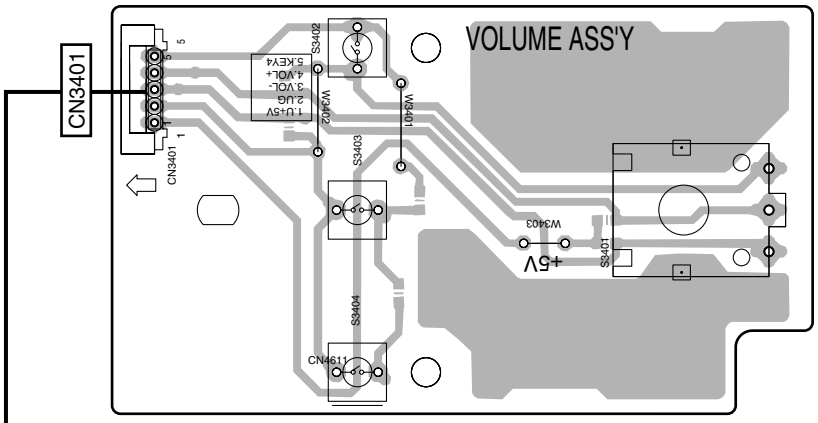
SIDE A



S U V

SIDE A

T VOLUME ASSY



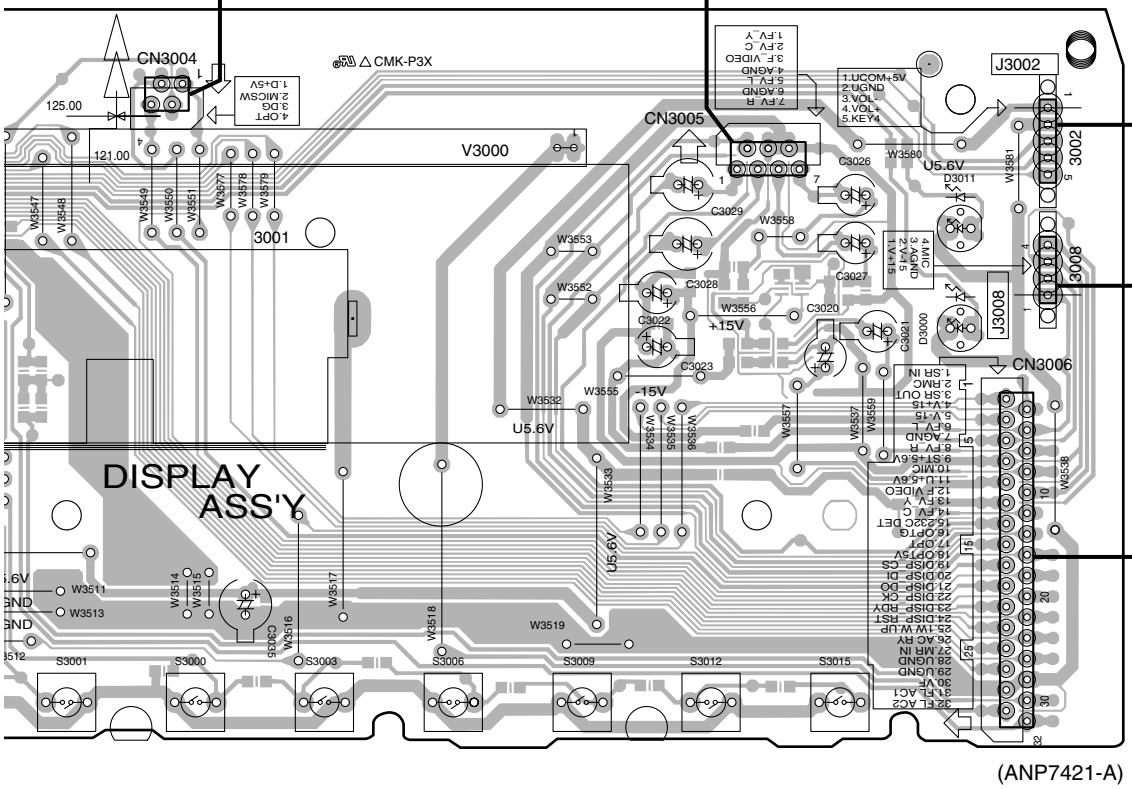
(ANP7420-B)

E ASSY

'420-B)

L CN1601

D CN1501



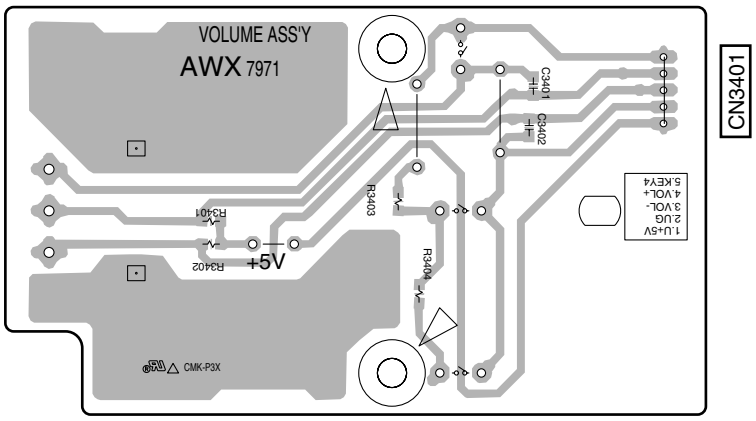
(ANP7421-A)

M CN4752

K CN501

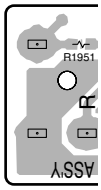
SIDE B

T VOLUME ASSY

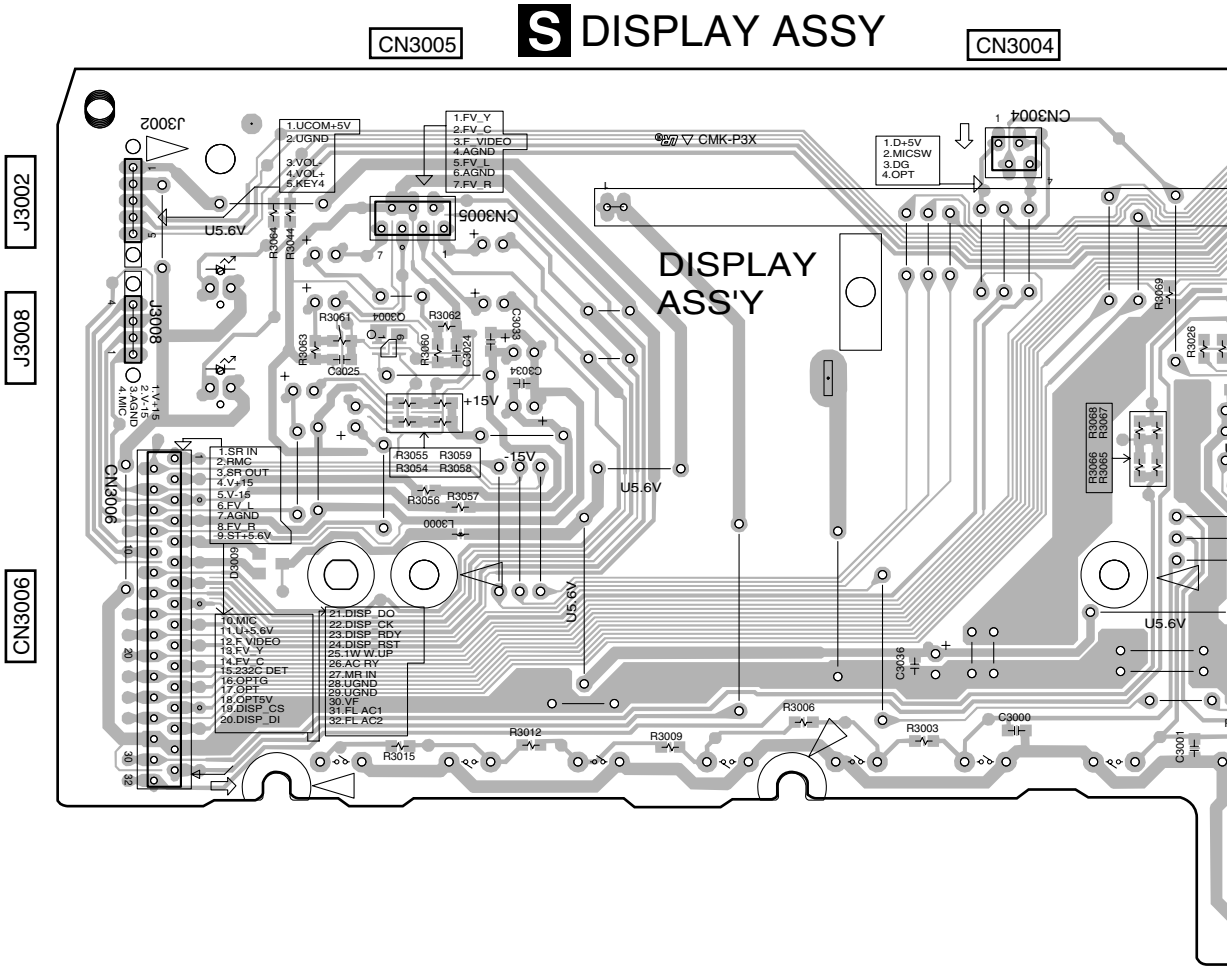


(ANP7420-B)

V HEA



S DISPLAY ASSY

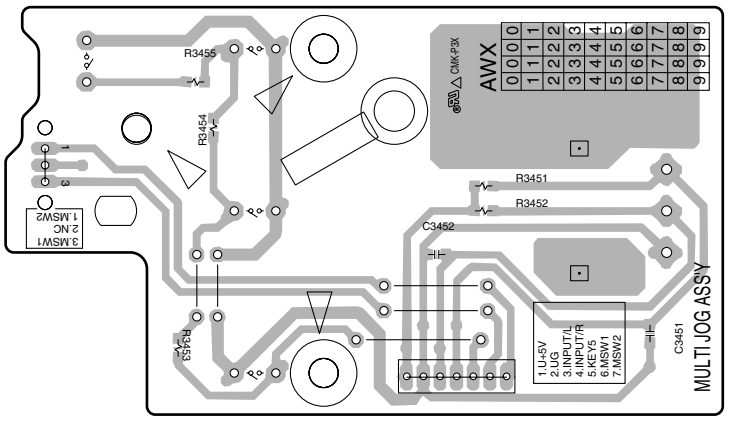


Q3004

S T V

SIDE B

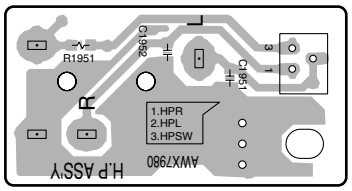
U MULTI JOG ASSY



CN3451

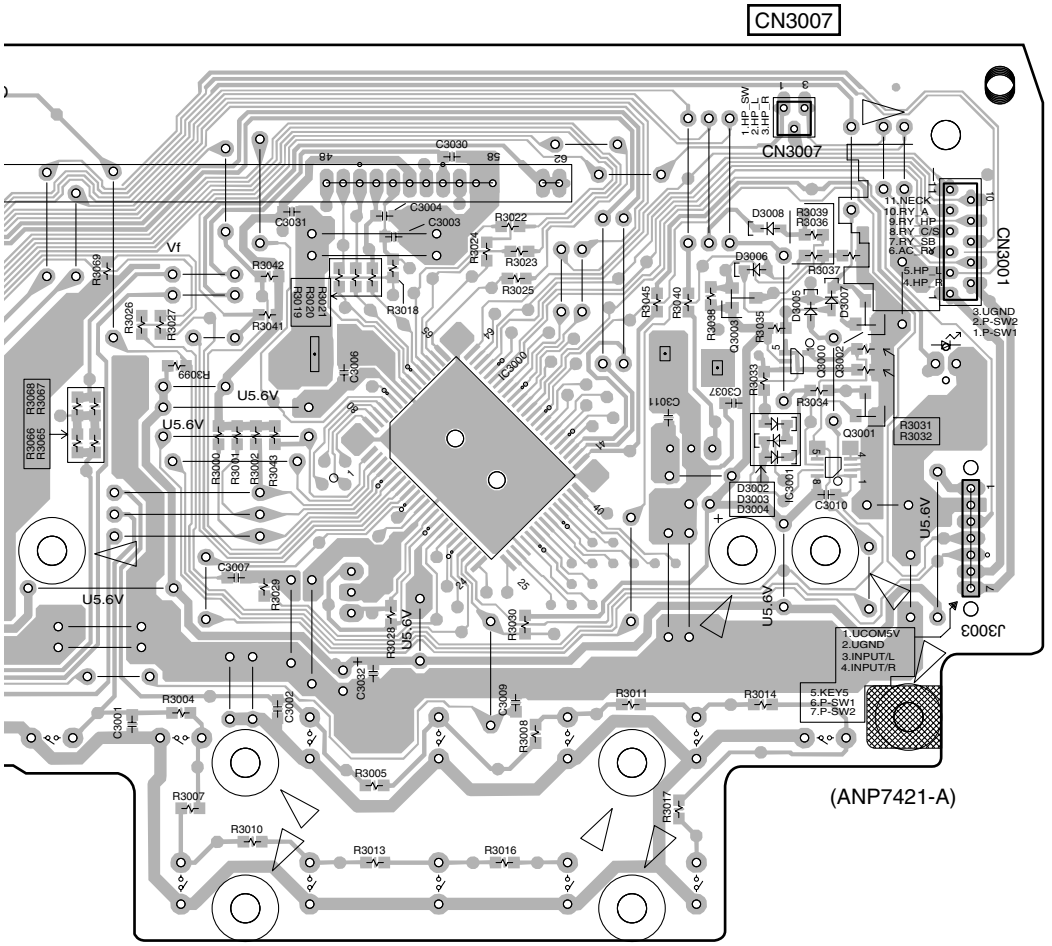
(ANP7420-B)

V HEADPHONE ASSY



CN1951

(ANP7420-B)



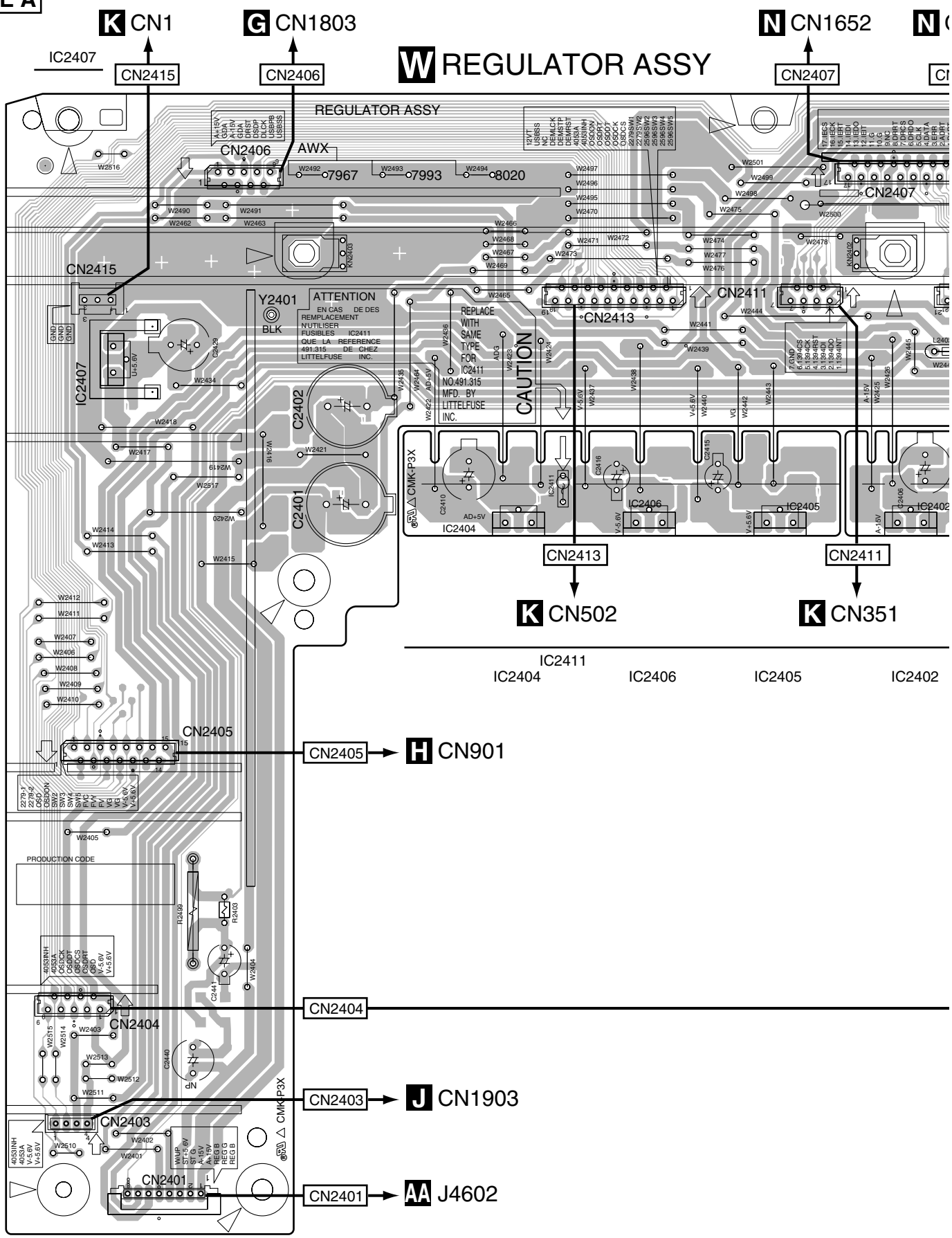
(ANP7421-A)

IC3000 Q3003 Q3002
Q3000 Q3001
IC3001

S U V

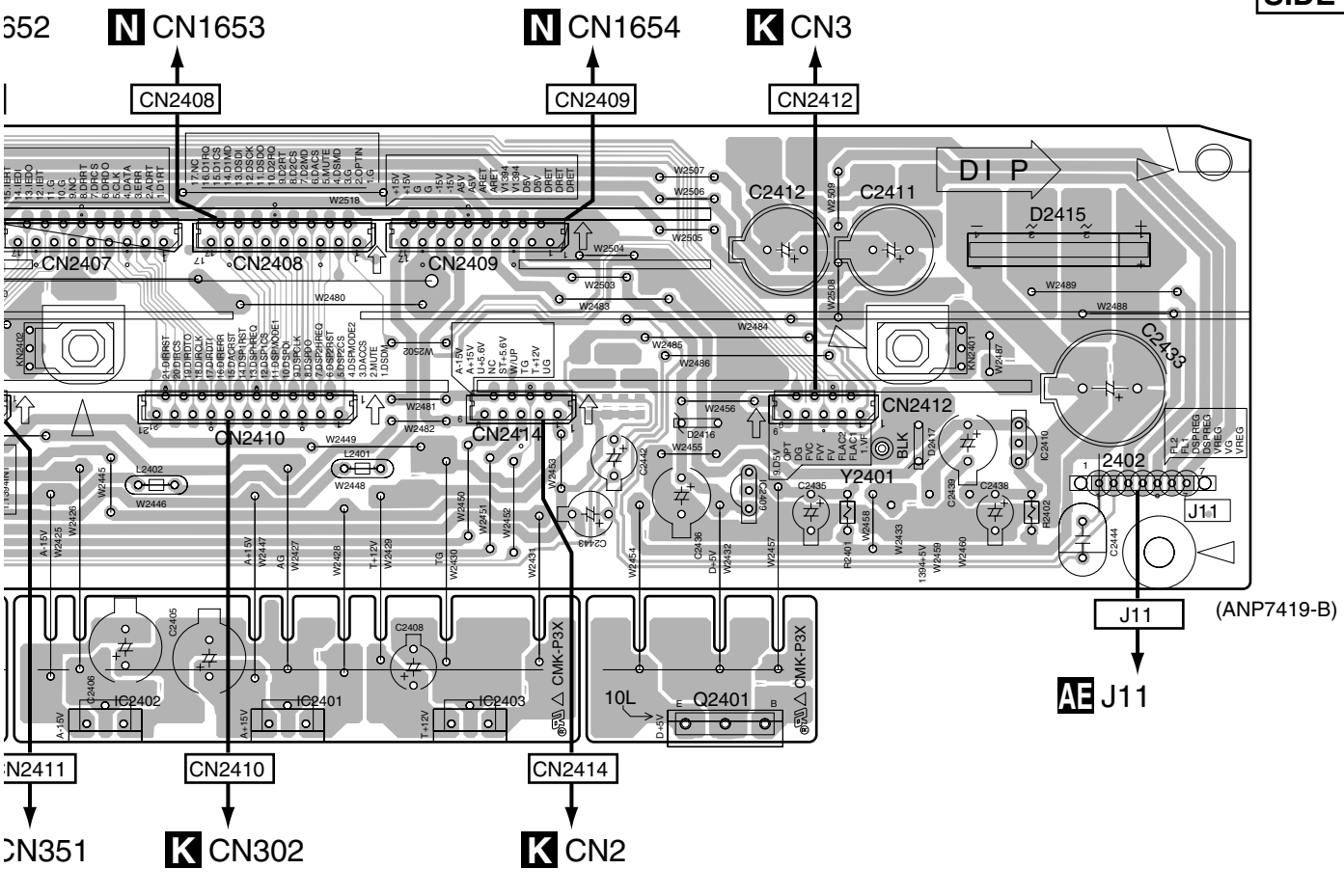
4.13 REGULATOR and COMPONENT ASSYS

SIDE A



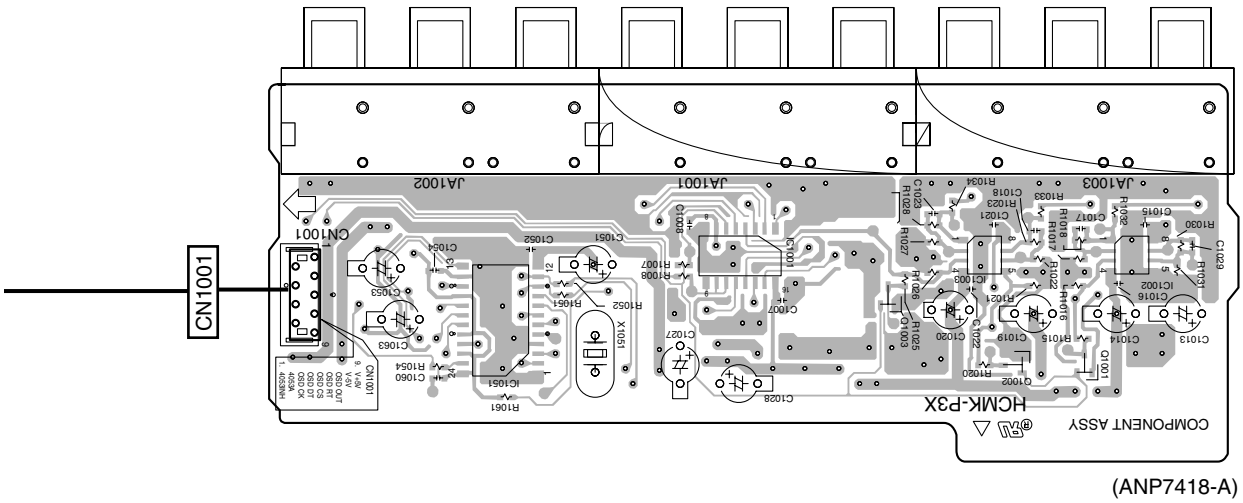
W

SIDE A



IC2402 IC2401 IC2403 IC2409 Q2401 Q2402 IC2410

I COMPONENT ASSY

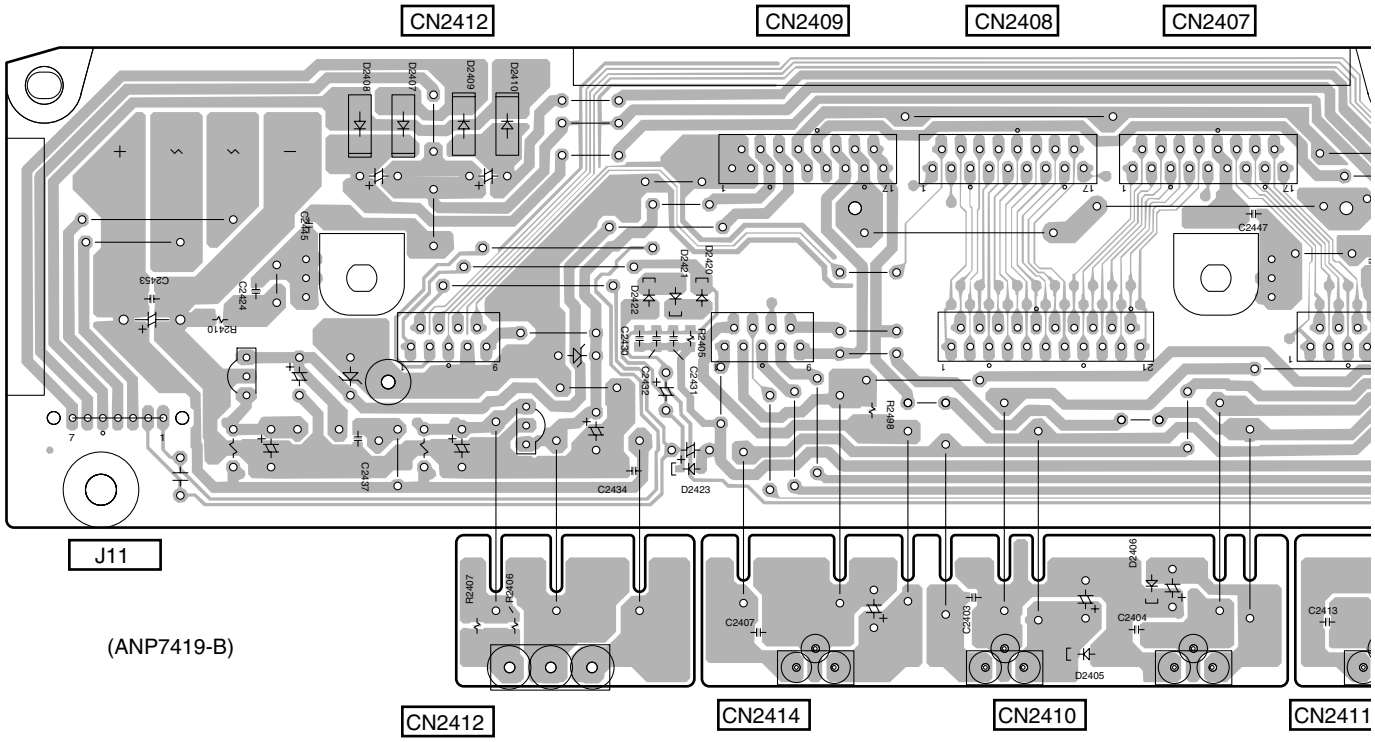


IC1051 IC1001 Q1003 IC1003 Q1002 IC1002 Q1001

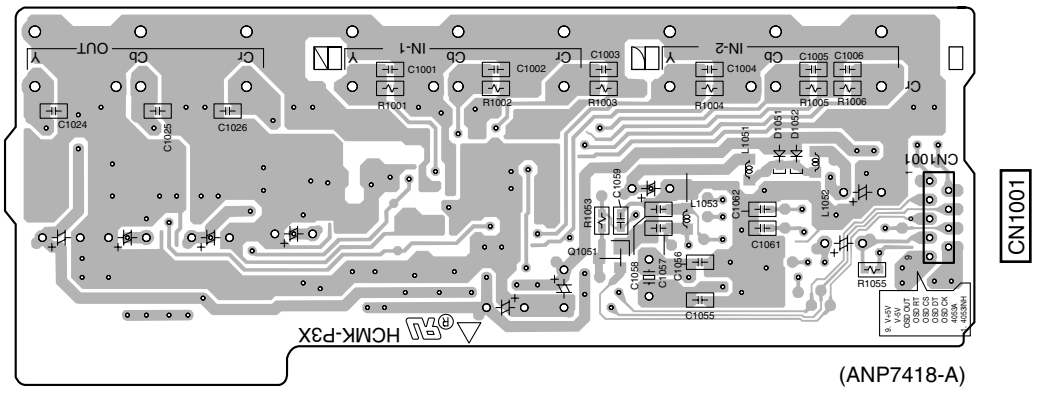
I W

SIDE B

W REGULATOR ASSY

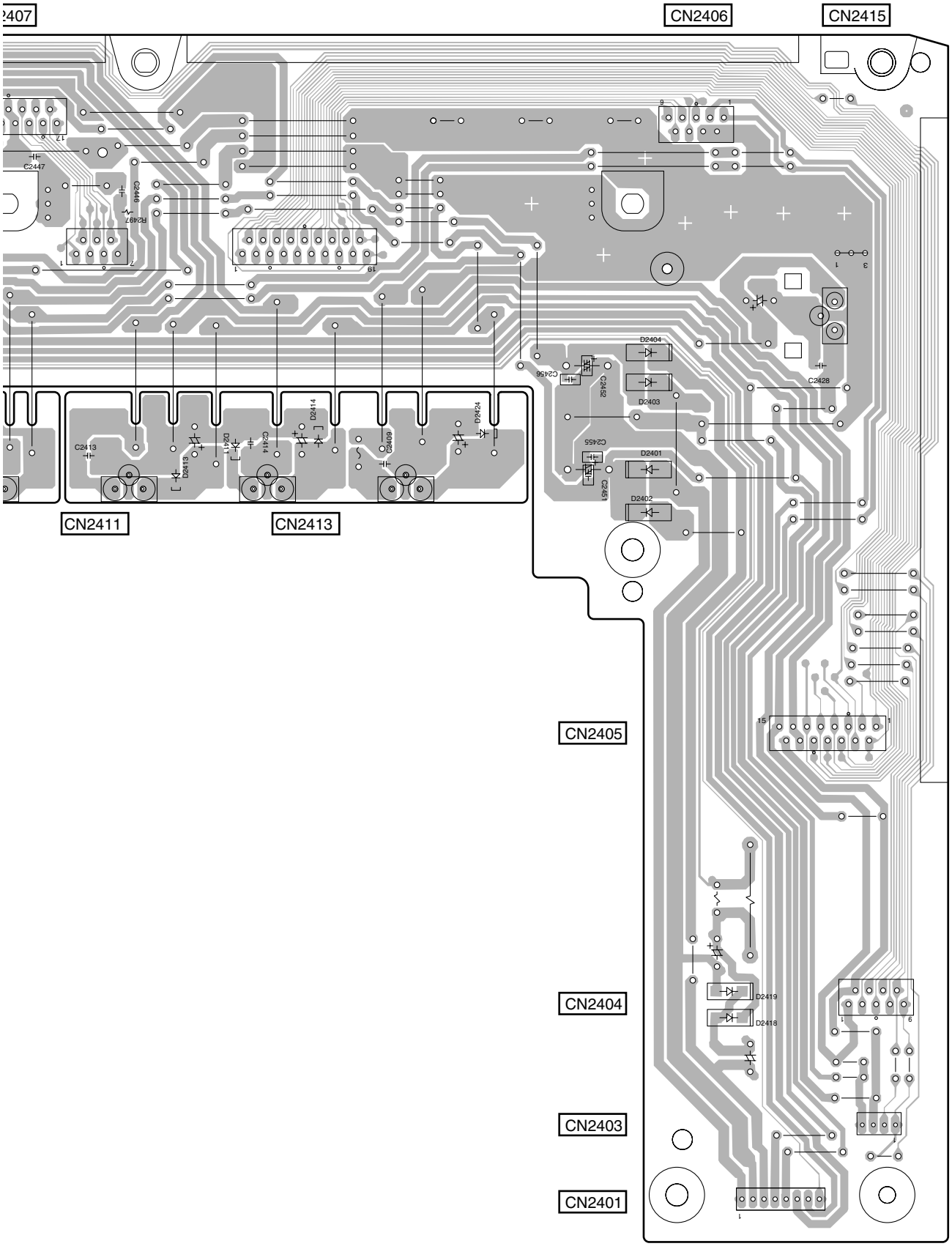


I COMPONENT ASSY



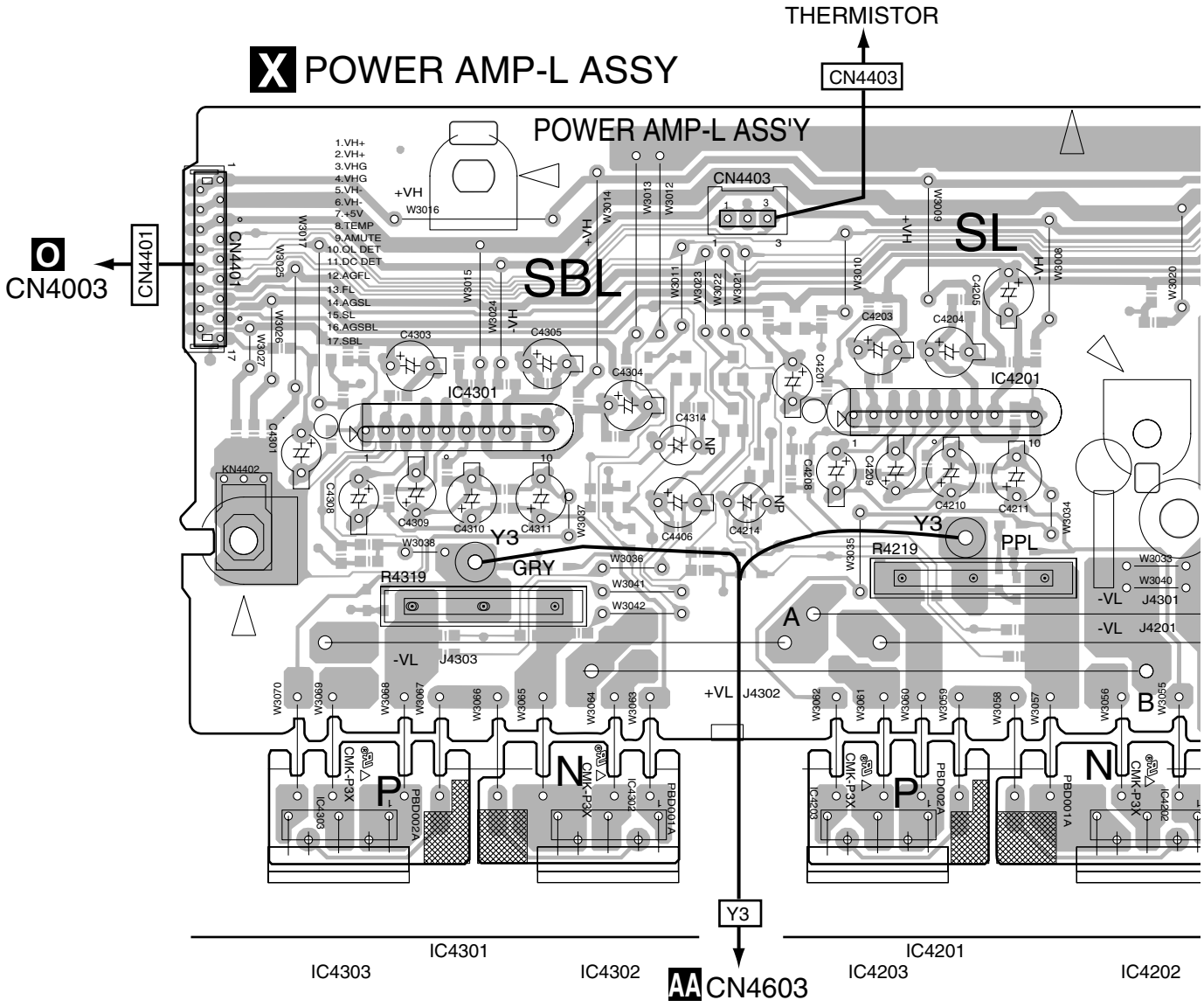
Q1051

SIDE B

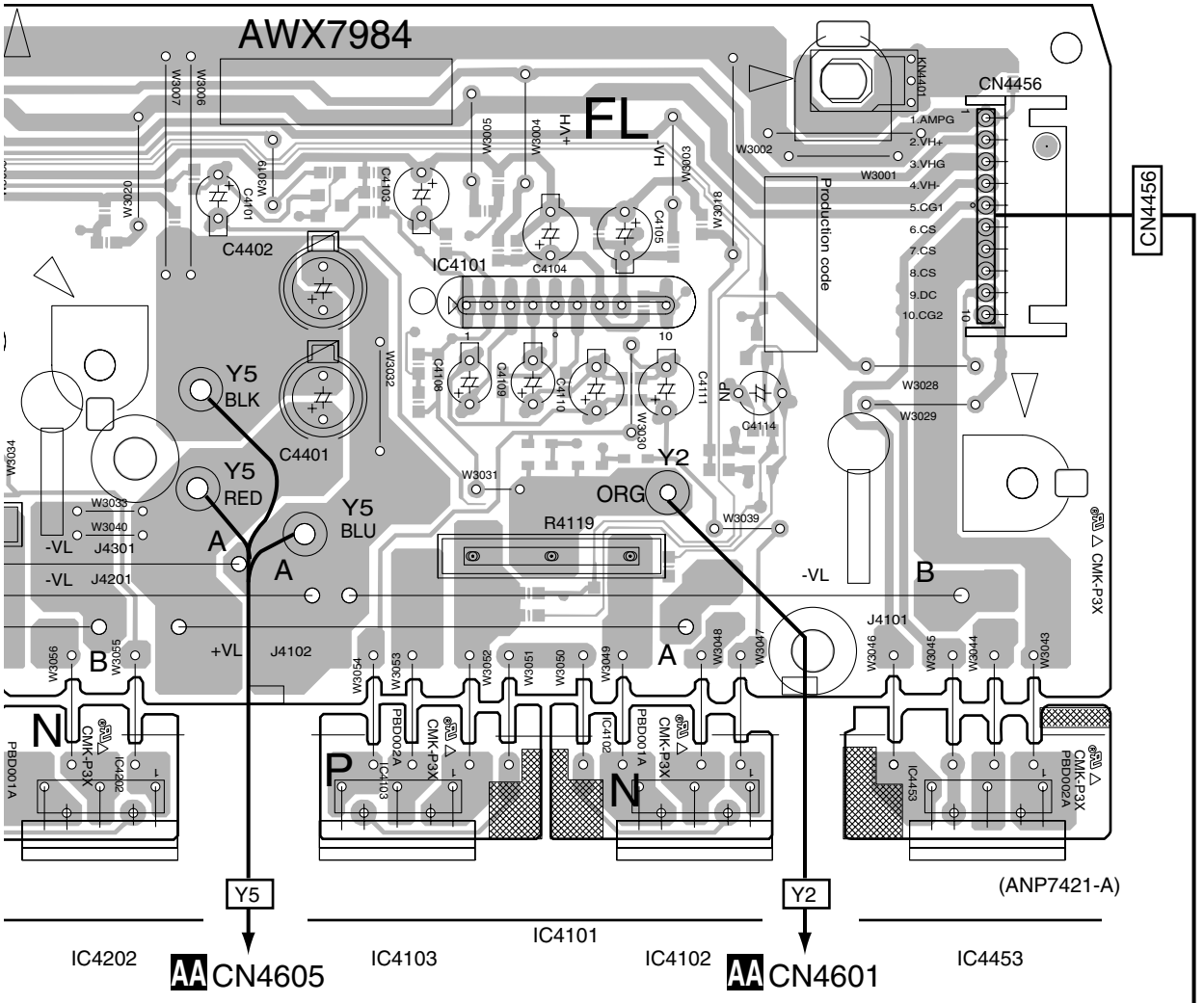

2407
CN2406
CN2415
CN2411
CN2413
CN2405
CN2404
CN2403
CN2401
C2447
C2446
R2497
C2413
D2413
D2411
C2411
D2414
C2409
D2424
C2456
C2452
D2404
D2403
C2455
C2451
D2401
D2402
C2428
D2419
D2418

4.14 POWER AMP L and POWER AMP C ASSYS

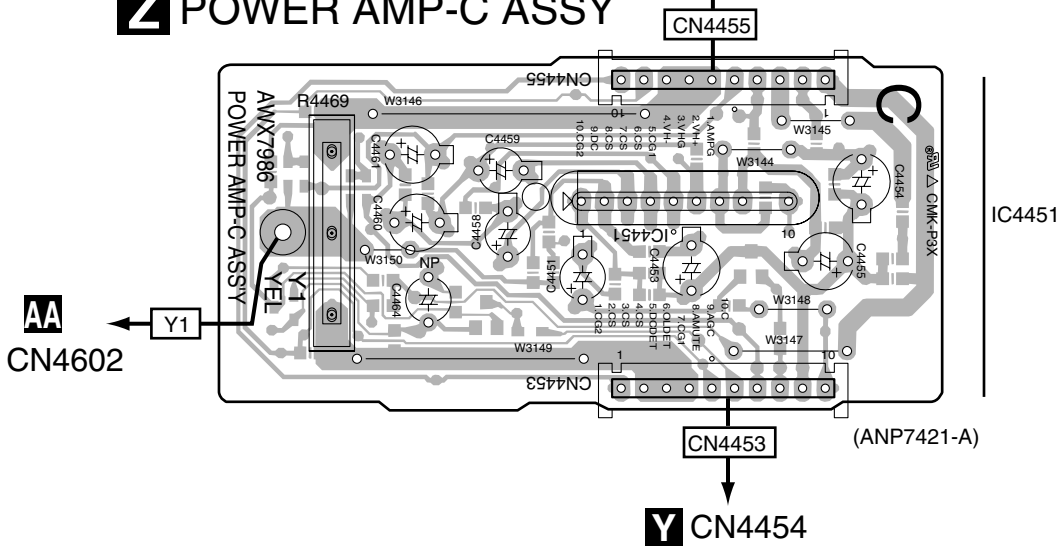
SIDE A



SIDE A



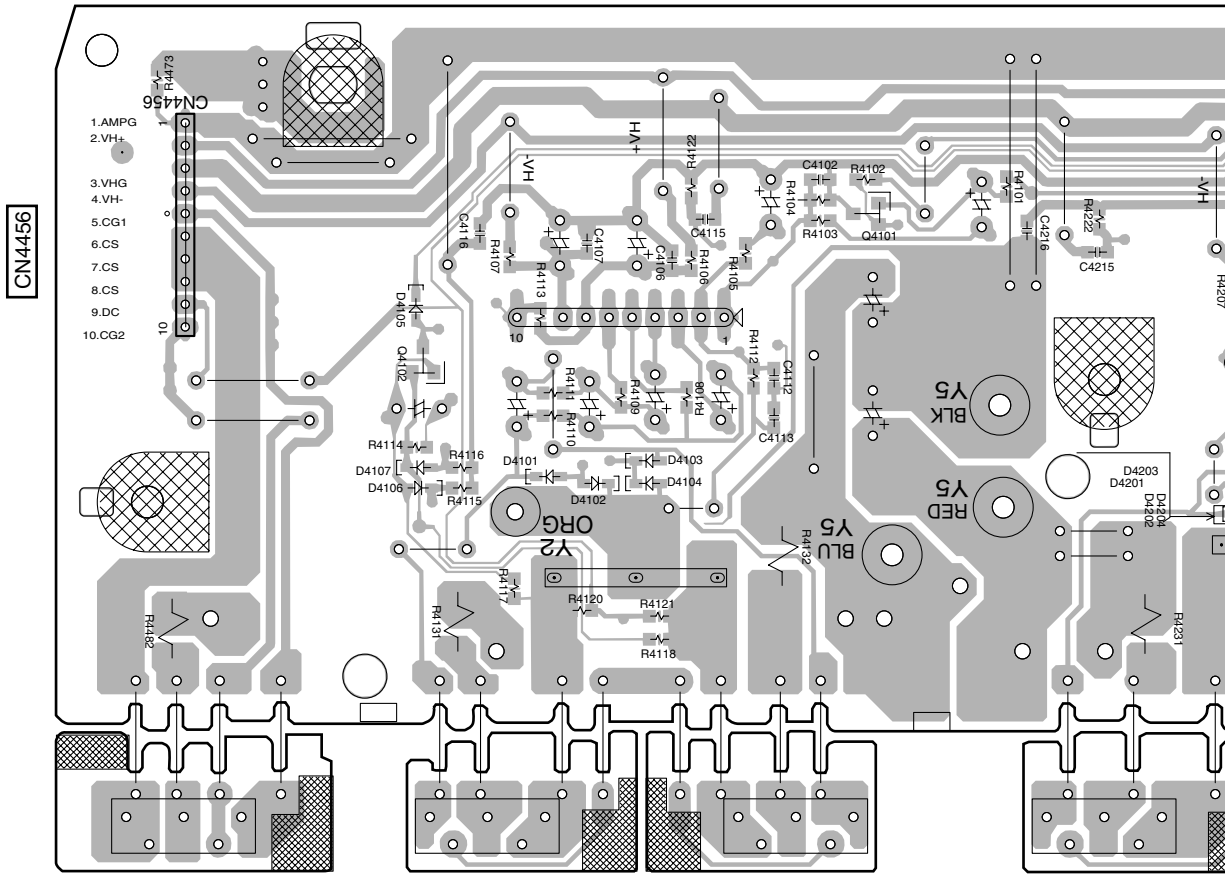
Z POWER AMP-C ASSY



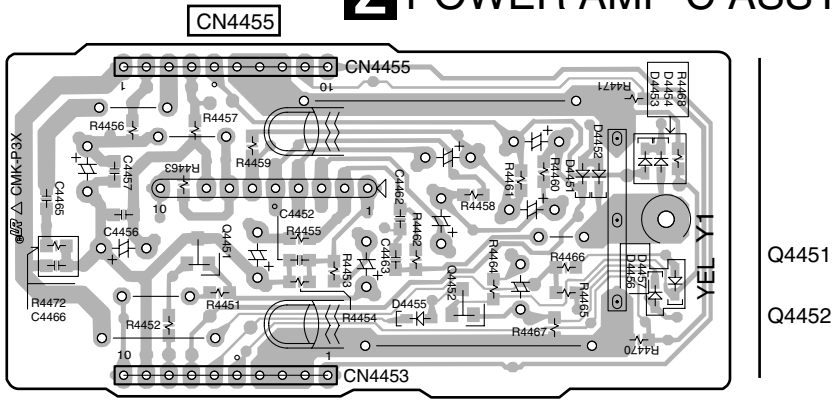
X Z

SIDE B

X POWER AMP-L ASSY

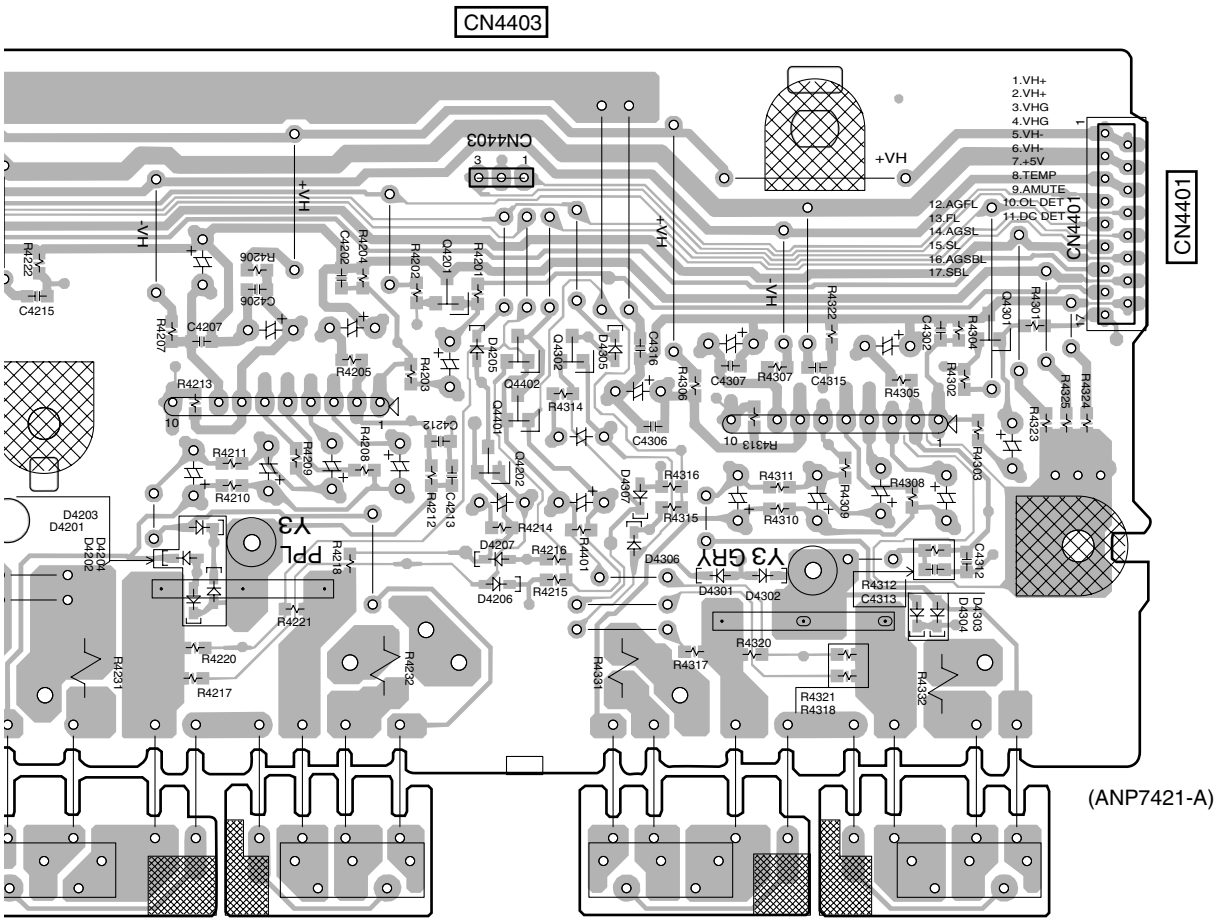


Z POWER AMP-C ASSY



X Z

SIDE B

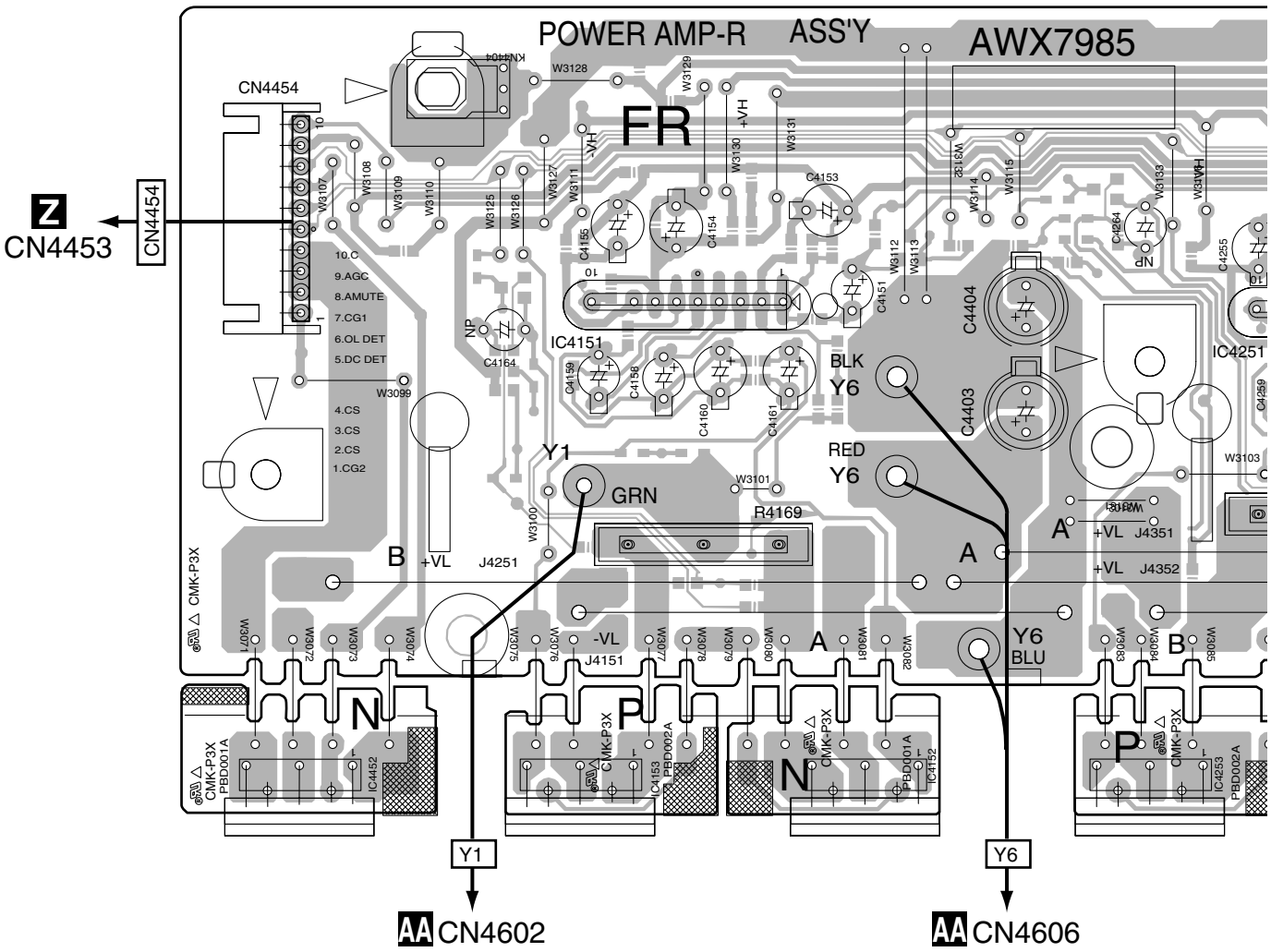


Q4201 Q4402 Q4302 Q4301
Q4401
Q4202

4.15 POWER AMP R ASSY

SIDE A

Y POWER AMP-R ASSY

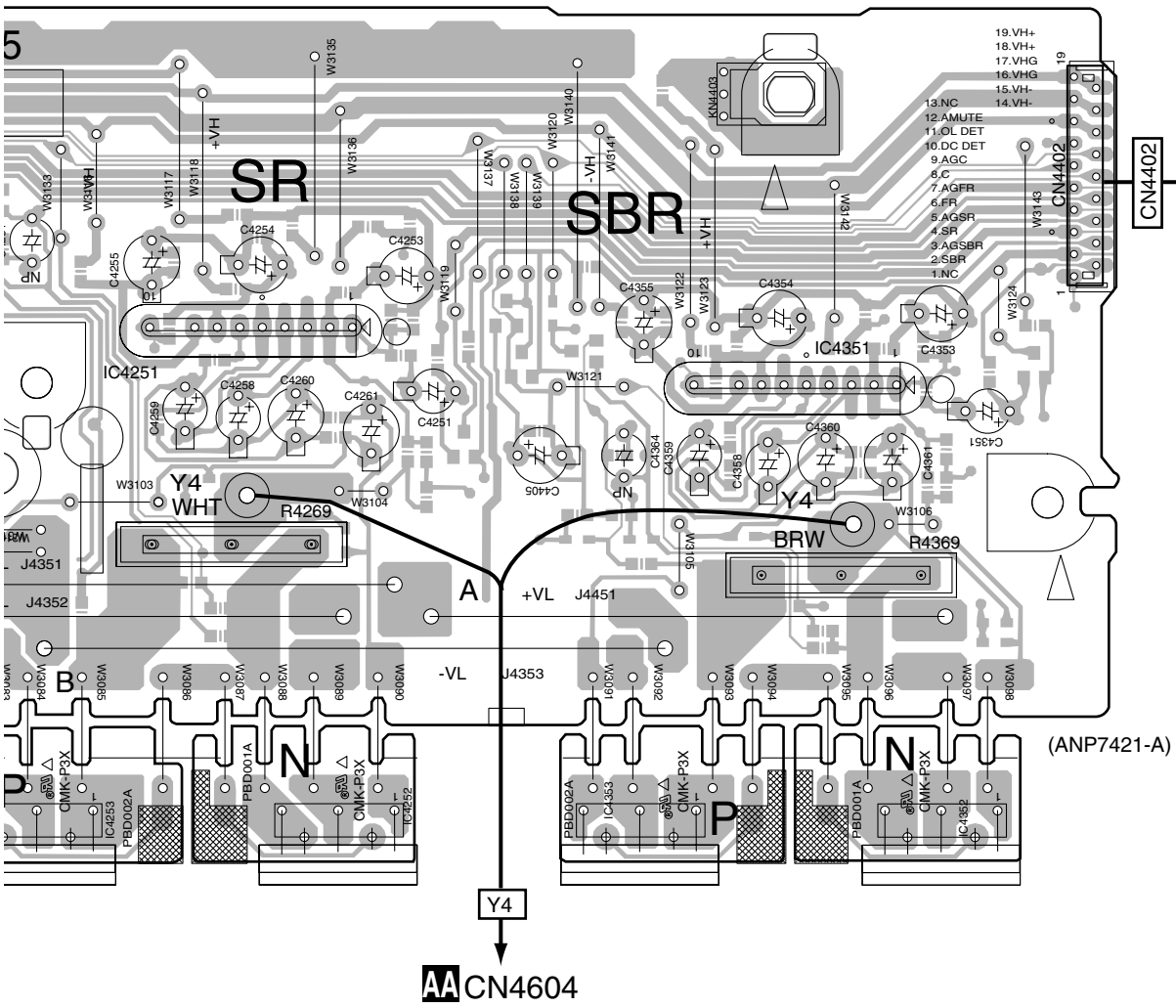


IC4151

IC4452 IC4153 IC4152 IC4253

Y

SIDE A



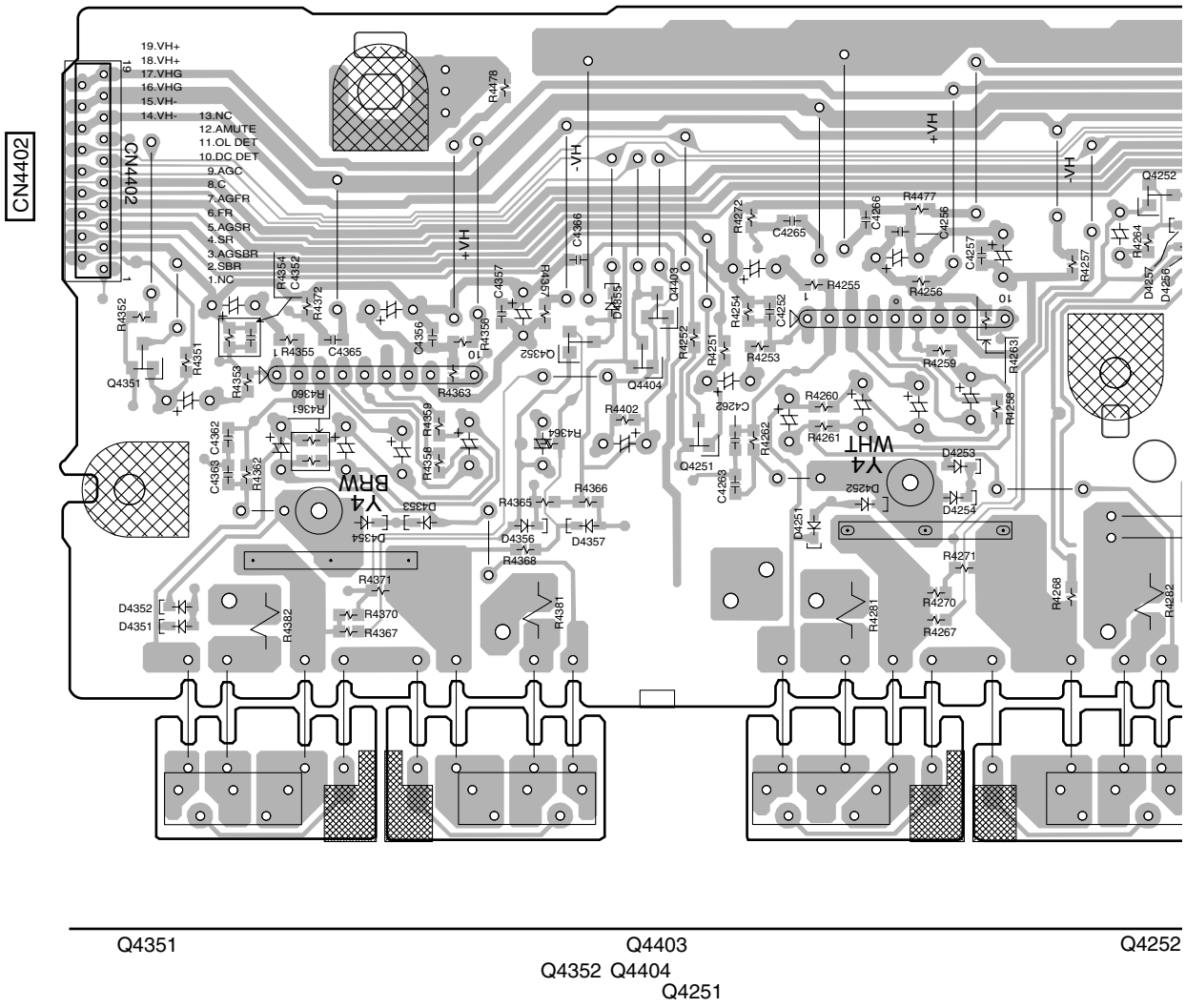
IC4251 IC4351

IC4253 IC4252 IC4353 IC4352

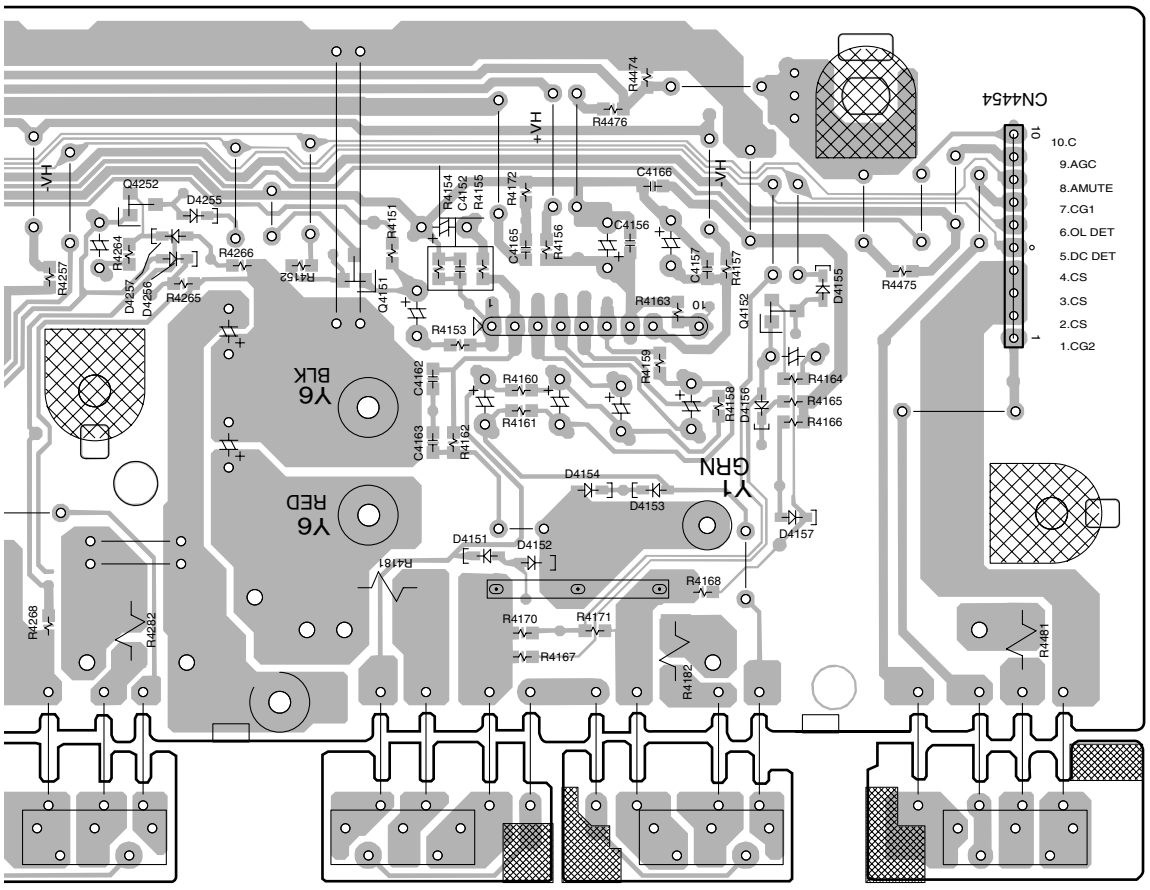
Y

SIDE B

Y POWER AMP-R ASSY



SIDE B



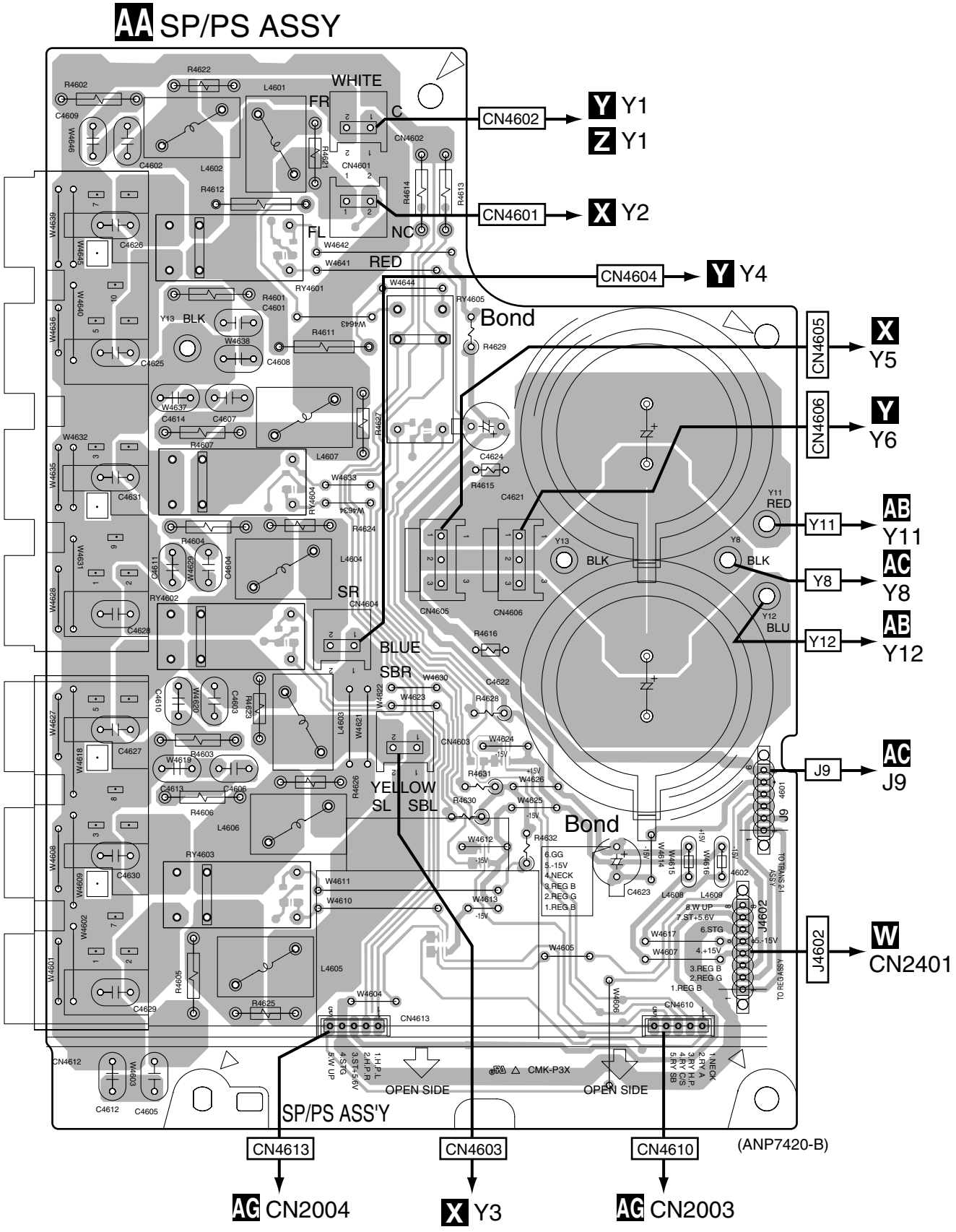
CN4454

(ANP7421-A)

Q4252 Q4151 Q4152

4.16 SP/PS ASSY

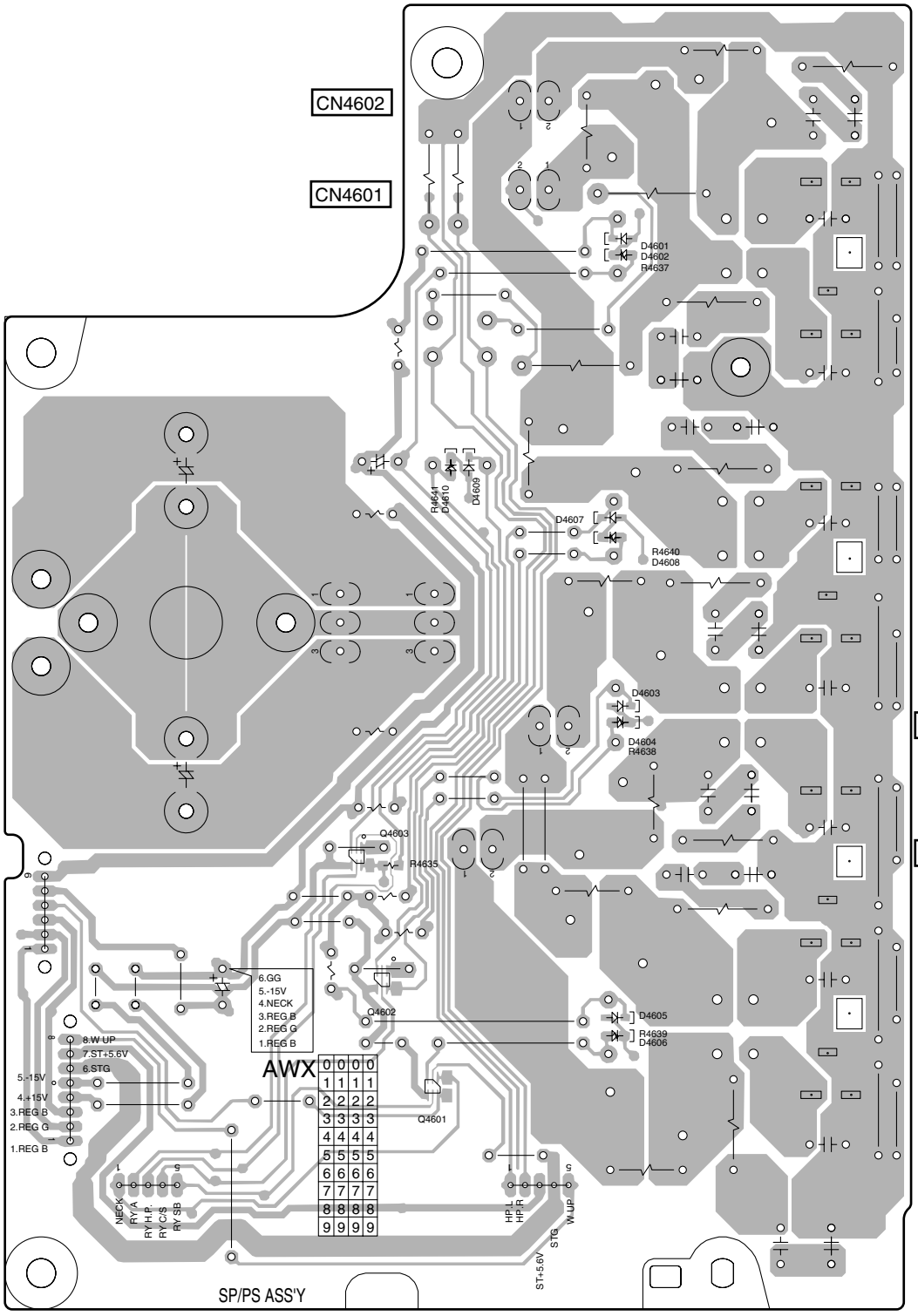
SIDE A



AA

SIDE B

AA SP/PS ASSY

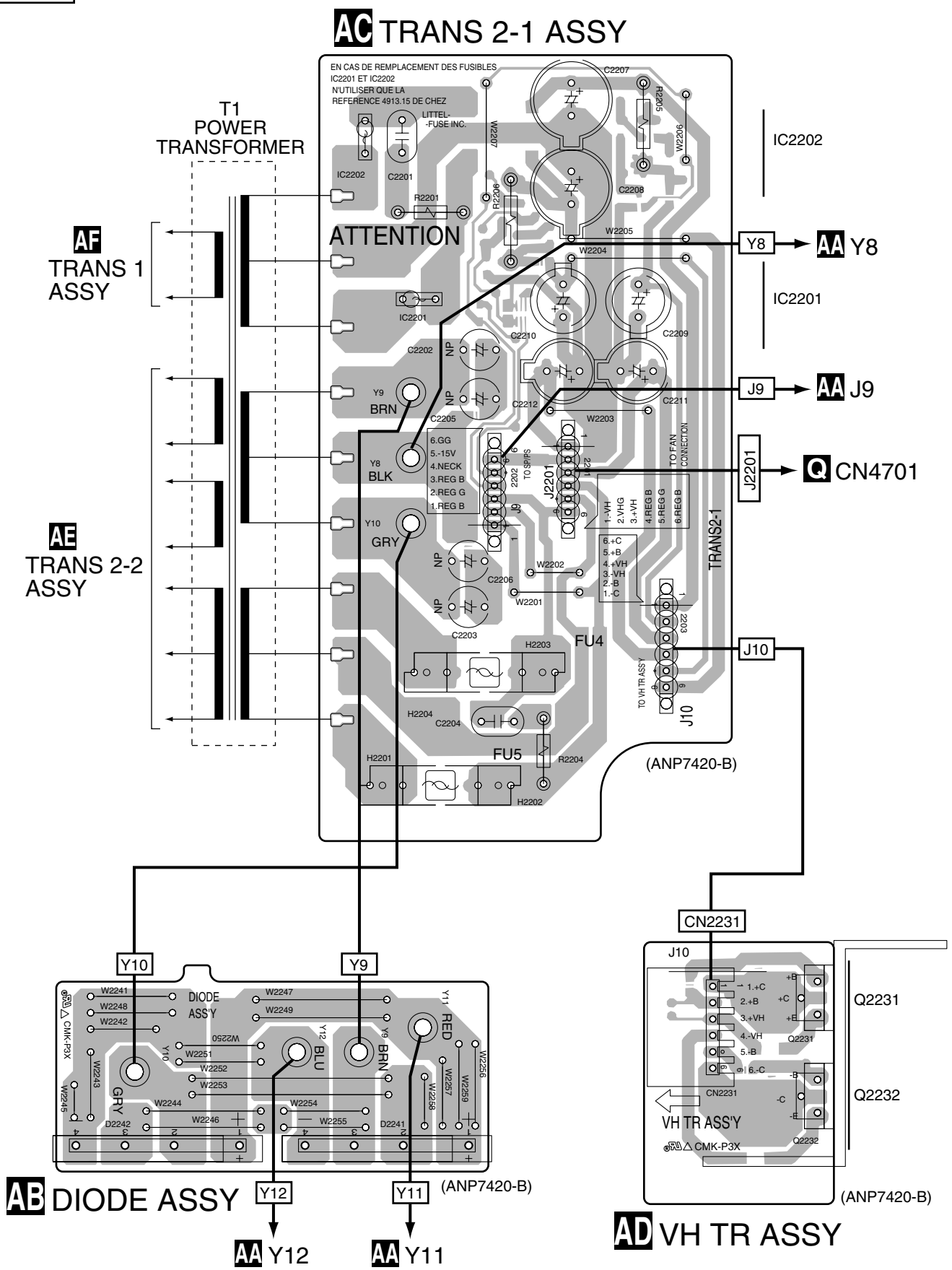


Q4603
Q4602 Q4601

AA

4.17 DIODE, TRANS 2-1 and VH TR ASSYS

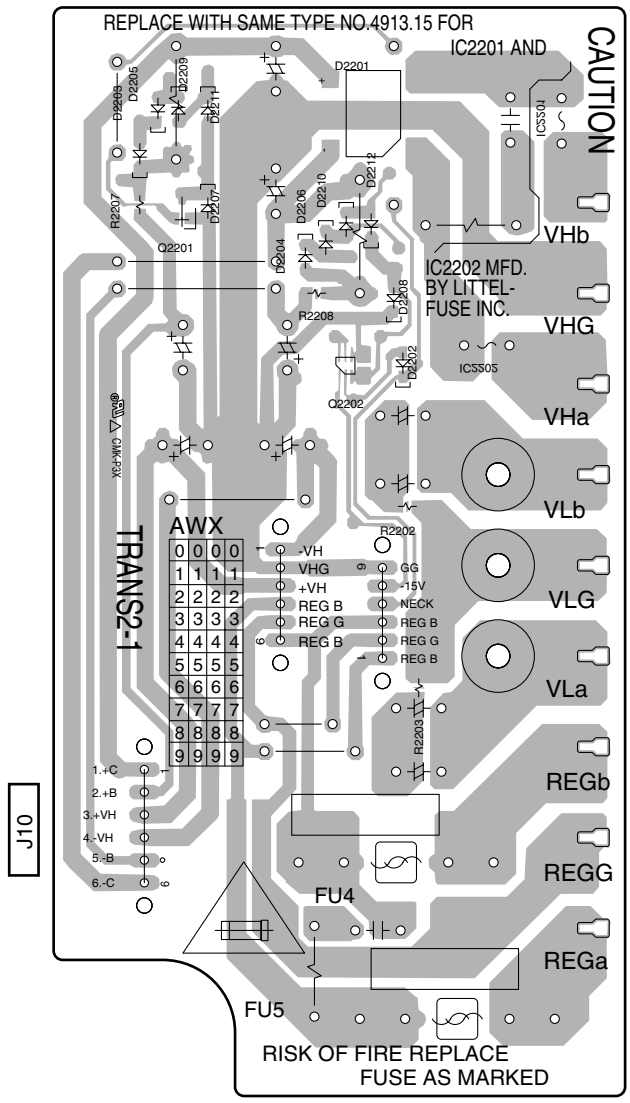
SIDE A



AB AC AD

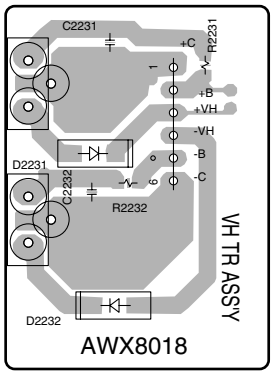
SIDE B

AC TRANS 2-1 ASSY



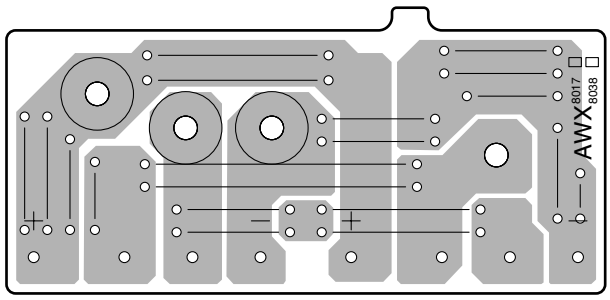
IC2201
Q2201
IC2202
Q2202

(ANP7420-B)



(ANP7420-B)

AD VH TR ASSY

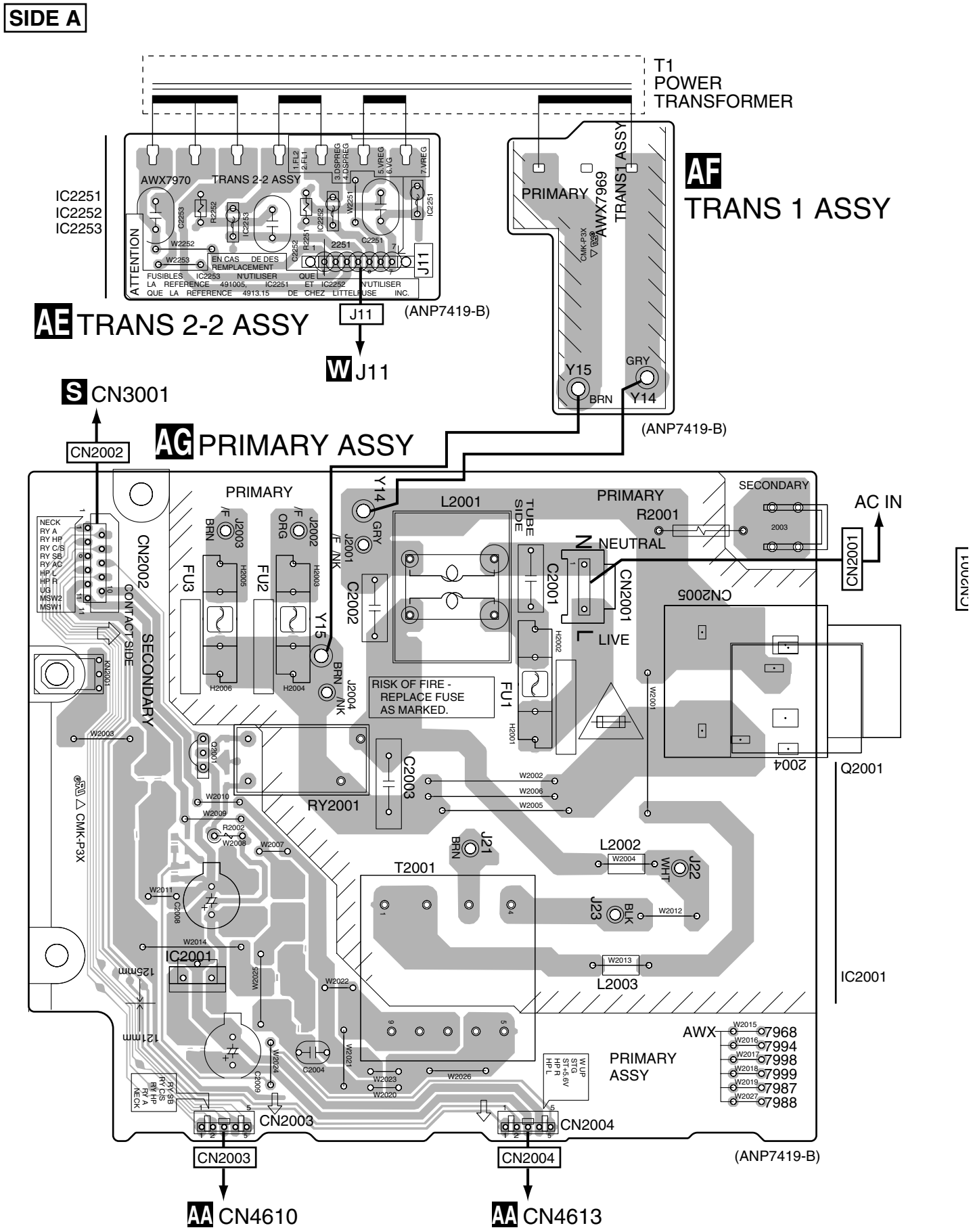


(ANP7420-B)

AB DIODE ASSY

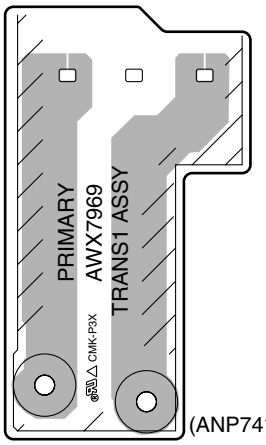
AB AC AD

4.18 TRANS 2-1, TRANS 1 and PRIMARY ASSYS



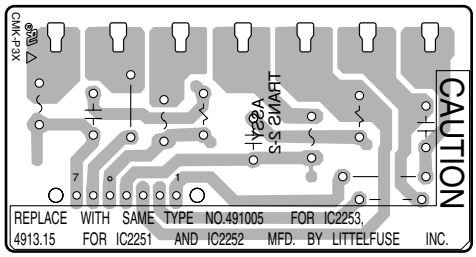
SIDE B

AF
TRANS 1 ASSY



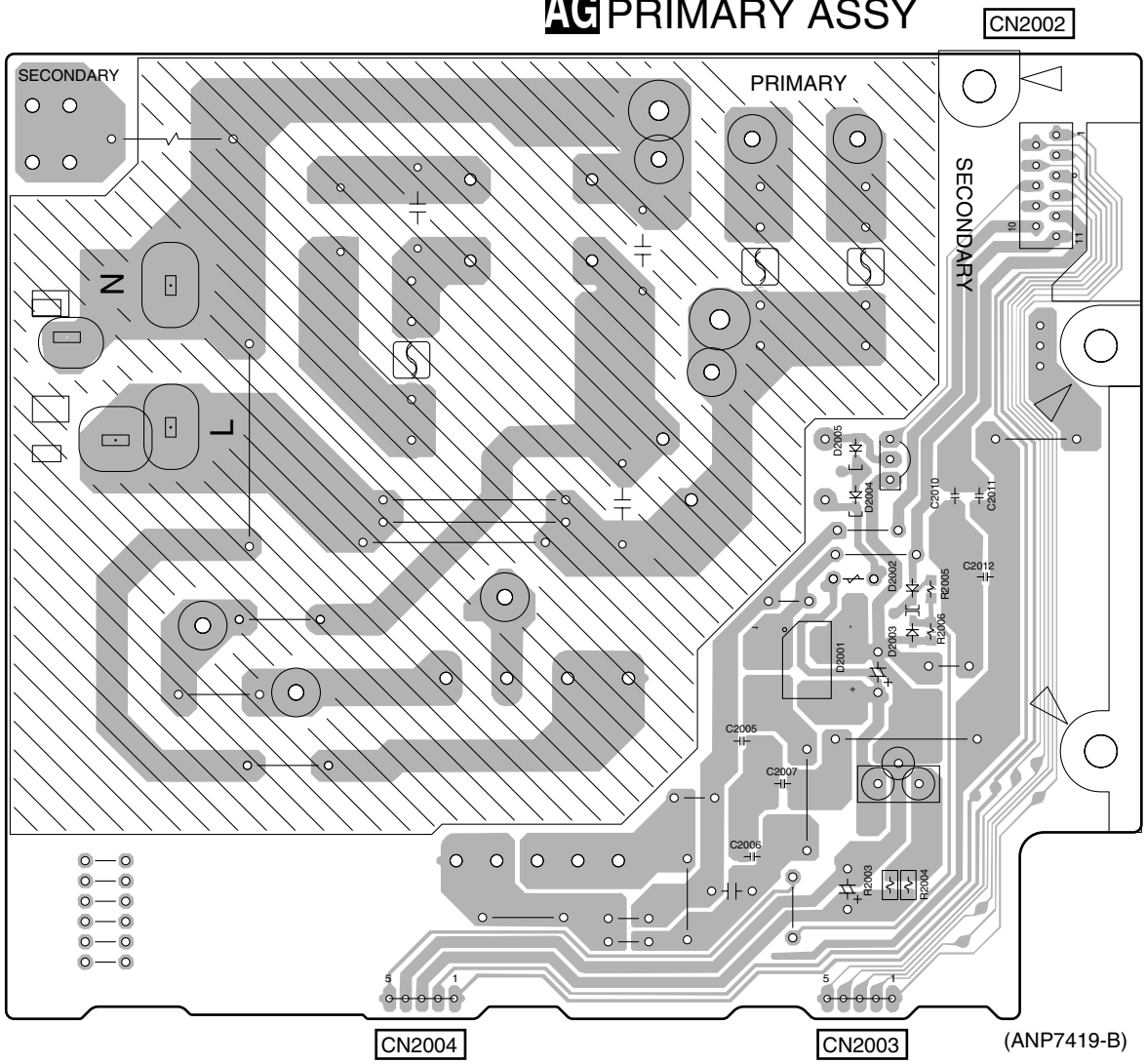
(ANP7419-B)

AE TRANS 2-2 ASSY



(ANP7419-B)

AG PRIMARY ASSY



(ANP7419-B)

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10[1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 x 10[3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10[1] → 5621 ..... RN1/4PC 5 6 2 1 F

• LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	VSX-45TX/ KUXJI/CA	VSX-43TX/ KUXJI/CA
	1..FM/AM TUNER MODULE	AXQ7231	AXQ7231
NSP	1..REGULATOR ASSY	AWK7731	AWK7731
	2..7.1 CH I/O ASSY	AWX7973	AWX7973
	2..POWER AMP IN ASSY	AWX7982	AWX7982
	2..FAN DRIVE ASSY	AWX7976	AWX7976
	2..REGULATOR ASSY	AWX7967	AWX7967
	2..TRANS 2-2 ASSY	AWX7970	AWX7970
	2..TRANS 1 ASSY	AWX7969	AWX7969
	2..PRIMARY ASSY	AWX7968	AWX7968
NSP	1..COMPLEX ASSY	AWK7732	AWK7742
	2..V-AUDIO IN ASSY	AWX7964	AWX7991
	2..FRONT IN ASSY	AWX7977	AWX7977
	2..OPTICAL IN ASSY	AWX7978	AWX7978
	2..INPUT CONNECT ASSY	AWX7974	AWX8041
	2..RS232C ASSY	AWX7966	Not used
	2..VOLUME ASSY	AWX7971	AWX7971
	2..MULTI JOG ASSY	AWX7972	AWX7972
	2..HEADPHONE ASSY	AWX7980	AWX7980
	2..SP/PS ASSY	AWX7975	AWX8037
	2..DIODE ASSY	AWX8017	AWX8038
	2..TRANS 2-1 ASSY	AWX7979	AWX7979
	2..VH TR ASSY	AWX8018	AWX8018
NSP	1..MAIN ASSY	AWK7730	AWK7740
	2..COAXIAL IN ASSY	AWX7965	AWX8013
	2..VIDEO ASSY	AWX7962	AWX8002
	2..COMPONENT ASSY	AWX7963	AWX8021
	2..MAIN CONTROL ASSY	AWX7961	AWX8000
	2..MIC & F.OPT IN ASSY	AWX7981	Not used
	2..MIC AMP ASSY	AWX8004	Not used
	2..DSP CONNECTION ASSY	AWX8024	AWX8024
	2..FAN CONNECTION ASSY	AWX8005	AWX8005
NSP	1..POWER AMP ASSY	AWK7733	AWK7743
	2..DISPLAY ASSY	AWX7983	AWX8011
	2..POWER AMP-L ASSY	AWX7984	AWX7984
	2..POWER AMP-R ASSY	AWX7985	AWX7985
	2..POWER AMP-C ASSY	AWX7986	AWX7986
	1..DSP ASSY	AWX8016	AWX8016

• CONTRAST OF PCB ASSEMBLIES

C V-AUDIO IN ASSY

AWX7964 and AWX7991 are constructed the same except for the following :

Mark	Symbol and Description	AWX7964	AWX7991
	Q1201, Q1202	2SC2878	Not used
	R1221-R1224	RS1/16S102J	Not used
	R1225, R1226	RS1/16S473J	Not used
	CN1202 4P PIN JACK	Not used	AKB7015
	CN1205 6P PIN JACK	AKB7009	Not used

F INPUT CONNECT ASSY

AWX7974 and AWX8041 are constructed the same except for the following :

Mark	Symbol and Description	AWX7974	AWX8041
	IC1401	M62429FP	Not used
	D1401	UDZS5.1B	Not used
	C1401-C1405	CEAT100M50	Not used
	C1406, C1407	CCSQCH101J50	Not used
	R1401, R1402	RS1/16S103J	Not used
	R1403, R1404	RS1/16S102J	Not used
	R1405	RS3LMF391J	Not used
	CN1402 7P SOCKET	AKP7067	Not used

G COAXIAL IN ASSY

AWX7965 and AWX8013 are constructed the same except for the following :

Mark	Symbol and Description	AWX7965	AWX8013
	IC1681	PCM2902EG	Not used
	IC1682	TC7SET08F	Not used
	C1680, C1697	CKSRYB103K50	Not used
	C1681	CEAT470M16	Not used
	C1683-C1686, C1689, C1690, C1698	CKSRYB104K16	Not used
	C1687	CCSRCH220J50	Not used
	C1688	CCSRCH180J50	Not used
	R1681	RS1/16S152J	Not used
	R1682, R1683	RS1/16S220J	Not used
	R1686	RS1/16S105J	Not used
	R1687	RS1/16S470J	Not used
	R1689	RS1/16S222J	Not used
	R1690	RS1/16S101J	Not used
	X1681 CRYSTAL RESONATOR (12.0MHz)	ASS7047	Not used
	JA1681 USB CONNECTOR	DKN1237	Not used

H VIDEO ASSY

AWX7962 and AWX8002 are constructed the same except for the following :

Mark	Symbol and Description	AWX7962	AWX8002
	IC902	NJM2279M	Not used
	IC903	TC4W53FU	Not used
	IC933	BU4053BCF	Not used
	Q901	2SA933S	Not used
	D902	DAN202K	Not used
	C909, C910, C918	CEAT101M16	Not used
	C911-C913, C915, C916, C921, C957, C958	CKSRYB473K50	Not used
	C914	CCSRCH470J50	Not used
	C919	CCSRCH150J50	Not used
	C920	CEAT470M25	Not used

Mark	Symbol and Description	AWX7962	AWX8002
	C922	CCSRCH181J50	Not used
	R911-R913, R926, R959, R960, R961	RS1/16S102J	Not used
	R914	RS1/16S101J	Not used
	R915, R921, R955, R956, R958	Not used	RS1/16S0R0J
	R916	RS1/16S104J	Not used
	R917	RS1/16S153J	Not used
	R918	RS1/16S103J	Not used
	R919	RS1/16S101J	Not used
	R920	RD1/2VM221J	Not used
	R922, R998	RS1/16S750J	Not used
	R954	RS1/16S0R0J	Not used
	JA905 1P PIN JACK	VKB1122	Not used

I COMPONENT ASSY

AWX7963 and AWX8021 are constructed the same except for the following :

Mark	Symbol and Description	AWX7963	AWX8021
	IC1051	PDC084A	Not used
	Q1051	DTC124EK	Not used
	D1051, D1052	1SS355	Not used
	L1051, L1052	LCYA100J2520	Not used
	L1053	LCYA330J2520	Not used
	C1051, C1053, C1063	CEAT101M16	Not used
	C1052, C1054, C1061, C1062	CKSRYB473K50	Not used
	C1055	CCSRCH150J50	Not used
	C1056	CCSRCH180J50	Not used
	C1057, C1058	CCSRCH240J50	Not used
	C1059	CCSRCH470J50	Not used
	C1060	CCSRCH101J50	Not used
	R1051, R1052, R1054	RS1/16S102J	Not used
	R1053	RS1/16S471J	Not used
	R1061	RS1/16S103J	Not used
	X1051 CRYSTAL RESONATOR (14.32MHz)	ASS1056	Not used

K MAIN CONTROL ASSY

AWX7961 and AWX8000 are constructed the same except for the following :

Mark	Symbol and Description	AWX7961	AWX8000
	IC201	TC9164AF	Not used
	IC202	NJM4558MD	Not used
	Q101, Q102	2SC3326	Not used
	Q103, Q251	DTA124EK	Not used
	C139, C140	CCSRCH470J50	Not used
	C201-C203	CCSRCH101J50	Not used
	C204, C205, C213, C214, C251	CKSRYB103K50	Not used
	C211, C212	CEAT1R0M50	Not used
	R135, R136	RS1/16S912J	RS1/16S0R0J
	R137, R138, R217, R218, R251	RS1/16S102J	Not used
	R141, R142	RS1/16S472J	Not used
	R143, R252	RS1/16S473J	Not used
	R161, R162	Not used	RS1/16S0R0J
	R201-R203, R215, R216	RS1/16S471J	Not used
	R213, R214	RS1/16S474J	Not used
	R523, R524	Not used	RS1/16S473J
	CN201 7P PLUG	AKP7056	Not used
	CN551 KR CONNECTOR	B8B-PH-K-S	Not used
	PCB BINDER	VEF1040	Not used

S DISPLAY ASSY

AWX7983 and AWX8011 are constructed the same except for the following :

Mark	Symbol and Description	AWX7983	AWX8011
	IC3001	TC7W53FU	Not used
	Q3000	FMA1A	Not used
	Q3001	DTC124EK	Not used
	D3002-D3005	1SS355	Not used
	C3010	CKSRYB153K50	Not used
	R3031, R3034	RS1/16S103J	Not used
	R3032	RS1/16S392J	Not used
	R3033	RS1/16S223J	Not used
	R3099	Not used	RS1/16S473J
	4P CABLE HOLDER	51048-0400	Not used
	J3008 JUMPER WIRE 04P	D20PYY0415E	Not used

AA SP/PS ASSY

AWX7975 and AWX8037 are constructed the same except for the following :

Mark	Symbol and Description	AWX7975	AWX8037
	L4608, L4609	RTF1167	Not used
	RY4601-RY4605	ASR7014	ASR7026
⚠	C4621, C4622	ACH7169	ACH7170
	C4623	CEAT101M50	Not used
	R4628-R4632	RD1/2VM331J	RD1/2VM471J

AB DIODE ASSY

AWX8017 and AWX8038 are constructed the same except for the following :

Mark	Symbol and Description	AWX8017	AWX8038
⚠	D2241, D2242	LN6SB60-4003	D5SBA20(B)

• PARTS LIST FOR VSX-45TX

Mark	No.	Description	Part No.
OTHERS			
	Y15	BOARD IN JUMPER	ADX7418
	Y14	BOARD IN JUMPER	ADX7419
	J11	JUMPER WIRE 7P	D20PYY0745E

COMPLEX ASSY

Mark	No.	Description	Part No.
OTHERS			
	Y8	BOARD IN JUMPER	ADX7284
	Y9	BOARD IN JUMPER	ADX7285
	Y10	BOARD IN JUMPER	ADX7286
	Y11	BOARD IN JUMPER	ADX7287
	Y12	BOARD IN JUMPER	ADX7288
	J9	JUMPER WIRE 6P	D20PYY0615E

A FM/AM TUNER MODULE

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC201		BA1451F
	IC202		LC72131MD
	Q201,Q204,Q205		2SC2412K
	Q202		DTA124ES
	Q203		DTC124EK
	D201		1SS133
	D202		MTZJ5.1C
COILS AND FILTERS			
	L201	FL COIL	ATE7003
	F202	FM CERAMIC FILTER	ATF-107
	F201	FM CERAMIC FILTER	ATF-119
	F203	AM CERAMIC FILTER	ATF7026
CAPACITORS			
	C206		CCSRCH100D50
	C212,C213,C226,C233-C235		CCSRCH101J50
	C240		CCSRCH101J50
	C231,C232		CCSRCH150J50
	C223		CEAT100M50
	C229		CEAT101M10
	C224		CEAT1R0M50
	C227		CEAT220M25
	C241		CEAT2R2M50
	C243		CEAT330M16
	C228		CEAT3R3M50
	C237		CEAT470M10
	C211		CEJA1R0M50
	C210		CEJA470M16
	C204,C238,C602		CKSRYB102K50

Mark No.	Description	Part No.
	C101,C102,C208,C220,C239	CKSRYB103K50
	C242,C601	CKSRYB103K50
	C216,C217,C225	CKSRYB153K50
	C201,C205,C209,C214,C230	CKSRYB223K50
	C236,C603	CKSRYB223K50
	C221	CKSRYB224K10
	C202,C222	CKSRYB473K16
	C215	CKSRYB681K50

RESISTORS

	R211	RD1/4PU221J
	R221	RD1/4PU222J
	R233	RD1/4PU391J
	R243	RS1/10S0R0J
	R103	RS1/10S331J
	R104	RS1/10S391J
	Other Resistors	RS1/16S###J

OTHERS

CN201	13P FFC CONNECTOR	52044-1345
BN201	4P ANTENNA TERMINAL	AKA7003
	SHIELD CASE T	ANK7072
	SHIELD CASE B	ANK7073
X201	CRYSTAL RESONATOR (7.2MHz)	ASS1093

B 7.1 CH I/O ASSY

SEMICONDUCTORS

IC1301-IC1304	UPC4570G2
Q1351,Q1352,Q1361,Q1362	HN1C03F
Q1371,Q1372,Q1381,Q1382	HN1C03F

CAPACITORS

C1301-C1304,C1307,C1308	CCSRCH101J50
C1311-C1314,C1317,C1318	CCSRCH101J50
C1321-C1324,C1327,C1328	CCSRCH101J50
C1331-C1334,C1337,C1338	CCSRCH101J50
C1351,C1352,C1361,C1362	CCSRCH331J50
C1371,C1372,C1381,C1382	CCSRCH331J50
C1309,C1310,C1319,C1320	CEAT100M50
C1329,C1330,C1339,C1340	CEAT100M50
C1305,C1306,C1315,C1316	CEAT4R7M50
C1325,C1326,C1335,C1336	CEAT4R7M50
C1341-C1348,C1391-C1394	CKSRYB103K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

CN1301-CN1304	4P PIN JACK	AKB7015
CN1306	5P SOCKET	AKP7066
CN1307,CN1308	9P SOCKET	AKP7068

C V-AUDIO IN ASSY

SEMICONDUCTORS

Q1201,Q1202	2SC2878

CAPACITORS

C1201-C1212	CCSRCH221J50
C1213-C1215	CKSRYB103K50

Mark No.	Description	Part No.

RESISTORS

All Resistors	RS1/16S###J

OTHERS

CN1205	6P PIN JACK	AKB7009
CN1201,CN1203	4P PIN JACK	AKB7015
CN1204	17P SOCKET	AKP7072

D FRONT IN ASSY

COILS AND FILTERS

L1501-L1504	CHIP BEAD	VTL1077

CAPACITORS

C1507-C1509	CCSRCH101J50
C1501,C1502	CCSRCH221J50
C1505	CKSRYB102K50
C1504,C1506	CKSRYB103K50
C1503	CKSRYB472K50
C1510	CKSRYB473K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

CN1501	7P FFC CONNECTOR	52044-0745
JA1501	FRONT INPUT	AKX7016
KN1501	EARTH METAL FITTING	VNF1084

E OPTICAL IN ASSY

COILS AND FILTERS

F1701	CHIP BEAD	DTF1064

CAPACITORS

C1706	CEAT470M16
C1701-C1705	CKSRYF104Z16

RESISTORS

All Resistors	RS1/16S###J

OTHERS

CN1701	9P FFC CONNECTOR	52045-0945
JA1701,JA1702	OPTICAL LINK IN	GP1FA502RZ
JA1703,JA1704	OPTICAL LINK OUT	GP1FA502TZ

F INPUT CONNECT ASSY

SEMICONDUCTORS

IC1401	M62429FP
IC1451	UPC4570G2
D1401	UDZS5.1B

CAPACITORS

C1406,C1407	CCSQCH101J50
C1401-C1405,C1451,C1452	CEAT100M50
C1454,C1455	CKSRYB103K50
C1453	CKSRYB472K50

RESISTORS

R1405	RS3LMF391J
Other Resistors	RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	CN1407	5P PLUG	AKP7055
	CN1406,CN1408	9P PLUG	AKP7057
	CN1405	17P PLUG	AKP7061
	CN1402	7P SOCKET	AKP7067
	CN1404	9P SOCKET	AKP7068
	CN1403	13P SOCKET	AKP7070
	CN1401	15P SOCKET	AKP7071

G COAXIAL IN ASSY

SEMICONDUCTORS

IC1681		PCM2902EG
IC1881		TC74HCU04AF
IC1682		TC7SET08F

COILS AND FILTERS

F1881	CHIP BEAD	DTF1064

CAPACITORS

C1688	CCSRCH180J50
C1687	CCSRCH220J50
C1885,C1886	CCSRCH470J50
C1887	CCSRCH471J50
C1681	CEAT470M16
C1890	CEAT470M25
C1680,C1697,C1857,C1858	CKSRYB103K50
C1883,C1884,C1888,C1897	CKSRYB103K50
C1683-C1686,C1689,C1690,C1698	CKSRYB104K16

RESISTORS

All Resistors	RS1/16S###J

OTHERS

X1681	CRYSTAL RESONATOR (12.0MHz)	ASS7047
CN1801	19P FFC CONNECTOR	52045-0945
JA1801	2P PIN JACK	AKB7131
CN1803	9P SOCKET	AKP7068
JA1681	USB CONNECTOR	DKN1237
CN1802	20P FFC CONNECTOR	VKN1196

H VIDEO ASSY

SEMICONDUCTORS

IC933	BU4053BCF
IC902	NJM2279M
IC901,IC931	NJM2296M
IC932	NJM2596M
IC903	TC4W53FU
Q901,Q931,Q932	2SA933S
Q933	IMZ1A
D901,D902	DAN202K

CAPACITORS

C981-C983	CCSRCH101J50
C919,C960,C963	CCSRCH150J50
C922-C925,C969-C974	CCSRCH181J50
C955	CCSRCH330J50
C914	CCSRCH470J50
C901-C904,C932,C935,C938	CEAT101M10
C941	CEAT101M10
C905,C906,C909,C910,C918	CEAT101M16
C945,C946,C951,C952,C959	CEAT101M16
C933,C936,C939,C942	CEAT1R0M50
C920,C961,C964	CEAT470M25
C943	CKSRYB103K50
C931,C934,C937,C940,C944	CKSRYB104K16
C966-C968	CKSRYB104K16
C907,C908,C911-C913	CKSRYB473K50
C915,C916,C921,C947,C948	CKSRYB473K50
C953,C954,C957,C958,C962	CKSRYB473K50
C965	CKSRYB473K50

RESISTORS

R920,R966	RD1/2VM221J
R969	RD1/2VM471J
Other Resistors	RS1/16S###J

OTHERS

JA904	COMB. JACK (S+1P)	AKB7146
JA901-JA903	COMB. JACK (2S+2P)	AKB7147
CN901	15P SOCKET	AKP7071
JA905	1P PIN JACK	VKB1122

I COMPONENT ASSY

SEMICONDUCTORS

IC1051	PDC084A
IC1001	TC74HC4053AF
IC1002,IC1003	TK15450M
Q1051	DTC124EK
D1051,D1052	1SS355

COILS AND FILTERS

L1051,L1052	LCYA100J2520
L1053	LCYA330J2520

CAPACITORS

C1060	CCSRCH101J50
C1055	CCSRCH150J50
C1056	CCSRCH180J50
C1057,C1058	CCSRCH240J50
C1024-C1026,C1059	CCSRCH470J50
C1017,C1018,C1023,C1029	CCSRCK2R0C50
C1013,C1014,C1019,C1020	CEAT101M16
C1027,C1028,C1051,C1053,C1063	CEAT101M16
C1007,C1008,C1015,C1016	CKSRYB103K50
C1021,C1022	CKSRYB103K50
C1052,C1054,C1061,C1062	CKSRYB473K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

X1051	CRYSTAL RESONATOR (14.32MHz)	ASS1056
CN1001	9P SOCKET	AKP7068
JA1001-JA1003	3P PIN JACK	VKB1150

J RS232C ASSY

SEMICONDUCTORS

⚠ IC1932	AEK7020
⚠ IC1931	BA12T
IC1901	SP232AEN
Q1931	2SB1237X
Q1901	2SC1740S

Mark	No.	Description	Part No.
	Q1932		DTC124EK
	D1901,D1902,D1921		1SS355
COILS AND FILTERS			
	L1901		LAU1R0J
CAPACITORS			
	C1901		CEAT101M16
	C1903-C1906		CEAT1R0M50
	C1932,C1933		CEHAT100M50
	C1902,C1907,C1911,C1921,C1931		CKSRYB103K50
	C1934-C1936		CKSRYB103K50
	C1909		CKSRYB331K50
RESISTORS			
	R1932		RS3LMF470J
	Other Resistors		RS1/16S###J
OTHERS			
	JA1921	MULTI-ROOM JACK	AKN7014
	CN1901	D-SUB SOCKET	AKP1213
	CN1902	KR CONNECTOR	B8B-PH-K
	CN1903	4P SOCKET	KP200TA4L
	JA1922	REMOTE CONTROL JACK	RKN1004
		SCREW TERMINAL	VNE1948

K MAIN CONTROL ASSY

SEMICONDUCTORS

IC502,IC503		BU4094BCF
IC202		NJM4558MD
IC501		PD5770B8
IC511		TC74VHC08FT
IC302		TC74VHCT244AFT
IC103		TC9163AF
IC201		TC9164AF
IC104		TC9215AF
IC101		TC9274F-019
IC701-IC704		TC94A07F
IC102,IC711-IC714		UPC4570G2
Q601		2SC1740S
Q101,Q102		2SC3326
Q103,Q251,Q511		DTA124EK
Q501		DTC143EK
D501,D511,D521-D524		1SS355
D821,D822,D831,D832		1SS355
D601		UDZ11B

COILS AND FILTERS

L501		LCYA2R2J2520
L891-L895	CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

C508	ACH7132
C719,C720,C739,C740	CCSRCH100D50
C759,C760,C779,C780	CCSRCH100D50
C125-C127,C151-C153	CCSRCH101J50
C201-C203,C725-C727	CCSRCH101J50
C745-C747,C765-C767	CCSRCH101J50
C785-C787	CCSRCH101J50
C139,C140,C662	CCSRCH470J50
C131,C132,C621,C622	CEAT100M50
C701,C702,C713,C714	CEAT100M50
C733,C734,C753,C754	CEAT100M50
C773,C774	CEAT100M50
C303,C304,C602	CEAT101M16
C211,C212	CEAT1R0M50
C506,C513	CEAT221M10
C505	CEAT2R2M50
C503	CEAT331M10
C717,C718,C721,C722	CEAT470M25
C737,C738,C741,C742	CEAT470M25
C757,C758,C761,C762	CEAT470M25
C777,C778,C781,C782	CEAT470M25
C133,C134	CEAT470M50
C511	CEAT471M10
C748,C749,C768,C769	CEV100M16
C788,C789	CEV100M16
C510	CKSQYF105Z16
C601	CKSQYF225Z16
C128,C129,C137,C138	CKSRYB103K50
C155-C157,C204,C205	CKSRYB103K50
C213,C214,C251,C302,C502	CKSRYB103K50
C507,C509,C514,C515,C535	CKSRYB103K50
C540,C598,C711,C712	CKSRYB103K50
C723,C724,C731,C732	CKSRYB103K50
C743,C744,C751,C752	CKSRYB103K50
C763,C764,C771,C772	CKSRYB103K50
C783,C784,C891,C892,C894	CKSRYB103K50
C512	CKSRYB472K50
C154,C599,C821,C831	CKSRYB473K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

X501	CERAMIC RESONATOR (15.7MHz)	ASS7032
CN552	10P FFC CONNECTOR	52045-1045
CN601	13P FFC CONNECTOR	52045-1345
CN801	24P FFC CONNECTOR	52045-2445
CN501	32P FFC CONNECTOR	52045-3245
CN201	7P PLUG	AKP7056
CN103	9P PLUG	AKP7057
CN102	13P PLUG	AKP7059
CN101	15P PLUG	AKP7060
CN351	7P SOCKET	AKP7067
CN2,CN3	9P SOCKET	AKP7068
CN502	19P SOCKET	AKP7073
CN302	21P SOCKET	AKP7074
CN551	KR CONNECTOR	B8B-PH-K
CN1	3P PLUG	KM250NA3L
JA591	REMOTE CONTROL JACK	RKN1004
JA592	REMOTE CONTROL JACK	RKN1026
	PCB BINDER	VEF1040
JA111-JA113	4P PIN JACK	VKB1132
CN301	21P FFC CONNECTOR	VKN1197

L MIC & F.OPT IN ASSY

COILS AND FILTERS

L1601	CHIP FERRITE BEAD	ATL7002

Mark	No.	Description	Part No.
	L1602,L1603	CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

	C1601,C1606	CCSRCH471J50
	C1603	CEAL470M16
	C1611	CKSRYB102K50
	C1602,C1612,C1614	CKSRYB103K50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN1601	4P FFC CONNECTOR	52044-0445
	J1601	CORD WITH PLUG	ADX7417
	JA1601	OPTICAL LINK IN	GP1FA502RZ
	JA1606	REMOTE CONTROL JACK	RKN1004
	CN1602	KR CONNECTOR	S3B-PH-K

M MIC AMP ASSY

SEMICONDUCTORS

⚠	IC4751	NJM78L05A
	IC4752	UPC4570G2
	D4751,D4752	UDZS5.1B

CAPACITORS

	C4753	CCSRCH101J50
	C4754	CCSRCH330J50
	C4751,C4752,C4755-C4757	CEAT100M50
	C4758,C4762-C4765	CKSRYB473K50

RESISTORS

	R4756	RD1/4MUF471J
	Other Resistors	RS1/16S###J

OTHERS

	CN4752	4P JUMPER CONNECTOR	52147-0410
	CN4751	KR CONNECTOR	B3B-PH-K
		PCB BINDER	VEF1040
	KN4751	EARTH METAL FITTING	VNF1084

N DSP CONNECTION ASSY

SEMICONDUCTORS

	IC1651	TC74LVX244FT

COILS AND FILTERS

	L1651	QTL1013

CAPACITORS

	C1651	CKSRYB103K50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN1652-CN1654	17P SOCKET	AKP7072
	CN1651	B TO B CONNECTOR 50P	AKP7177

O POWER AMP IN ASSY

SEMICONDUCTORS

	Q4001	2SC2412K
	D4001	1SS355

Mark	No.	Description	Part No.

CAPACITORS

	C4002	CKSRYB104K16
	C4001	CKSRYB223K50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

		10P CABLE HOLDER	51048-1000
	CN4001	24P FFC CONNECTOR	52044-2445
	CN4003	17P PLUG	AKP7061
	CN4002	19P PLUG	AKP7062
	J12	JUMPER WIRE 10P	D20PYY1010E
	CN4004	3P L TYPE PLUG	KM250MA3L

P FAN DRIVE ASSY

SEMICONDUCTORS

	Q4056	2SA1037K
	Q4051	2SC4793
	Q4054	2SD1859X
	Q4052	DTA124EK
	Q4055	DTC114EK
	Q4053	DTC124EK
⚠	D4051,D4052	1SR154-400
	D4059	1SS355
	D4054,D4055	UDZ12B
	D4053	UDZ27B
	D4057	UDZS5.1B

CAPACITORS

	C4054	CEAT101M16
	C4052	CEAT1R0M50
	C4055,C4056	CEAT221M63
	C4051	CEAT471M35
	C4053	CKSRYB103K50

RESISTORS

	R4057,R4058	RS3LMF331J
	Other Resistors	RS1/16S###J

OTHERS

	CN4051	9P JUMPER CONNECTOR	52147-0910
	CN4054	10P JUMPER CONNECTOR	52147-1010

Q FAN CONNECTION ASSY

SEMICONDUCTORS

⚠	IC4701,IC4702	AEK7023

OTHERS

		9P CABLE HOLDER	51048-0900
	CN4701	6P JUMPER CONNECTOR	52147-0610
	J4701	JUMPER WIRE 9P	D20PYY0915E
	CN4702	3P PLUG	KM250MA3

R DSP ASSY

SEMICONDUCTORS

	IC201	AK4114VQ
	IC561	AK4382AVT
	IC501,IC521,IC541	AK4383VT
	IC101	AK5380VT
	IC301,IC401	DSPC56367PV150

Mark	No.	Description	Part No.
	IC302,IC451		IS61LV6416-12T
	IC303		IS63LV1024-12T
⚠	IC901		NJM2391DL1-33
	IC601,IC621,IC641,IC661,IC681		NJM4565MD
⚠	IC902		NJU7223DL1-18
	IC471		PD8100A
	IC701		TC74VHC157FT
	IC304		TC74VHCU04FT
	IC503,IC705,IC706		TC7SH04FU
	IC305		TC7WH125FU
	Q681,Q682		2SK208
	Q683,Q701,Q971,Q972,Q974		UN5112
	Q684,Q702,Q973		UN5212
	Q601,Q621,Q641,Q661		XP4506
	D681,D682,D721		1SS355
	D702		DAN202K
	D701,D971,D972		DAP202K
	D101-D104		RB501V-40

COILS AND FILTERS

L301-L304,L401,L402,L451	CHIP FERRITE BEAD	ATL7002
L471,L904,L906,L907	CHIP FERRITE BEAD	ATL7002
L101-L104,L201-L203	CHIP SOLID INDUCTOR	QTL1013
L305,L306,L501,L503,L511	CHIP SOLID INDUCTOR	QTL1013
L521,L531,L541,L551,L561	CHIP SOLID INDUCTOR	QTL1013
L571,L701,L705,L706	CHIP SOLID INDUCTOR	QTL1013
L403	CHIP BEAD	VTL1072
L502	CHIP BEAD	VTL1077

CAPACITORS

C339,C340	CCSRCH100D50
C202	CCSRCH150J50
C623,C625,C643-C646	CCSRCH151J50
C663-C666	CCSRCH151J50
C201	CCSRCH220J50
C204,C206,C209,C301,C302	CCSRCH471J50
C304,C306,C308,C309,C312	CCSRCH471J50
C314,C316,C318,C319	CCSRCH471J50
C321,C322,C325,C326	CCSRCH471J50
C329,C330,C332,C333,C335	CCSRCH471J50
C337,C345,C346,C402	CCSRCH471J50
C404-C408,C410-C418	CCSRCH471J50
C420-C422,C424-C426,C451	CCSRCH471J50
C471	CCSRCH471J50
C603-C606	CCSRCH820J50
C111,C112,C502,C522,C542	CEV100M16
C562,C607,C608,C627,C628	CEV100M16
C647,C648,C667,C668	CEV100M16
C681,C682	CEV100M16
C104,C105,C551,C907,C909	CEV101M16
C106	CEV2R2M50
C901,C902	CEV330M25
C210,C341,C401	CEV470M6R3
C212,C614,C624,C626	CKSRYB102K50
C683-C685,C689,C693,C695	CKSRYB102K50
C925	CKSRYB102K50
C343,C429,C677,C678,C924	CKSRYB103K50
C101-C103,C205,C207,C208	CKSRYB104K16
C211,C305,C307,C310,C311	CKSRYB104K16
C313,C315,C324,C331,C334	CKSRYB104K16
C338,C348,C352,C409,C419	CKSRYB104K16
C423,C427,C452,C501,C503	CKSRYB104K16
C521,C541,C561,C591,C630	CKSRYB104K16
C701,C705,C706,C906,C908	CKSRYB104K16
C303,C403	CKSRYB105K6R3
C109,C110,C622	CKSRYB222K50
C601,C602,C609,C610	CKSRYB332K50
C621,C641,C642,C661,C662	CKSRYB392K50
C629,C649,C650,C669,C670	CKSRYB472K50
C971	CKSRYB472K50
C923	CKSRYB473K16
C203	CKSRYB474K10
C323,C428	CKSRYB563K16
C107,C611-C613,C615	CKSRYF104Z25
C671,C672,C694,C696-C698	CKSRYF104Z25

RESISTORS

R851	RAB4C101J
R204,R225,R226,R229,R701	RAB4C104J
R712	RAB4C104J
R221	RS1/16S1802F
Other Resistors	RS1/16S###J

OTHERS

CN102	B TO B CONNECTOR 50P	AKP7176
X201	CRYSTAL RESONATOR (24MHz)	ASS7025
X301	CRYSTAL RESONATOR (33MHz)	ASS7040
CN702	10P FFC CONNECTOR	VKN1414
CN101	20P FFC CONNECTOR	VKN1424
CN601	21P FFC CONNECTOR	VKN1425
CN701	22P FFC CONNECTOR	VKN1426
KN931	EARTH METAL FITTING	VNF1109

S DISPLAY ASSY

SEMICONDUCTORS

IC3000	PD5771A
IC3002	RPM7140-H4
IC3001	TC7W53FU
Q3003	2SA1037K
Q3001,Q3002	DTC124EK
Q3000	FMA1A
Q3004	HN1C01FU
D3002-D3008	1SS355
D3001	BR5064X
D3009	DAN202K
D3000	MAA5064X

COILS AND FILTERS

L3000	CHIP FERRITE BEAD	ATL7002

SWITCHES AND RELAYS

S3000-S3017	ASG7013

CAPACITORS

Mark No.	Description	Part No.
C3003,C3004,C3007,C3024,C3025		CCSRCH101J50
C3020,C3021,C3026,C3027		CEJQ100M16
C3028,C3029		CEJQ101M10
C3008,C3012,C3035		CEJQ101M6R3
C3022,C3023		CEJQ330M25
C3000-C3002		CKSRYB102K50
C3009,C3011,C3032-C3034		CKSRYB103K50
C3036,C3037		CKSRYB103K50
C3006,C3031		CKSRYB104K16
C3010		CKSRYB153K50
C3030		CKSRYF104Z50

RESISTORS

All Resistors		RS1/16S###J

OTHERS

X3000	CERAMIC RESONATOR (4.19MHz)	ASS7042
	4P CABLE HOLDER	51048-0400
	5P CABLE HOLDER	51048-0500
	7P CABLE HOLDER	51048-0700
CN3007	3P FFC CONNECTOR	52045-0345
CN3004	4P FFC CONNECTOR	52045-0445
CN3005	7P FFC CONNECTOR	52045-0745
CN3001	11P FFC CONNECTOR	52045-1145
CN3006	32P FFC CONNECTOR	52045-3245
V3000	FL TUBE	AAV7087
J3008	JUMPER WIRE 4P	D20PYY0415E
J3002	JUMPER WIRE 5P	D20PYY0510E
J3003	JUMPER WIRE 7P	D20PYY0715E
	FL HOLDER	VNF1085

T VOLUME ASSY

SWITCHES AND RELAYS

S3402-S3404	ASG7013
S3401	ASX7037

CAPACITORS

C3401,C3402	CKSRYB103K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

CN3401	5P JUMPER CONNECTOR	52147-0510

U MULTI JOG ASSY

SWITCHES AND RELAYS

S3452-S3455	ASG7013
S3451	ASX7038

CAPACITORS

C3451,C3452	CKSRYB103K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

CN3451	7P JUMPER CONNECTOR	52147-0710

Mark No.	Description	Part No.

V HEADPHONE ASSY

CAPACITORS

C1951,C1952	CKSRYB392K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

CN1951	3P FFC CONNECTOR	52045-0345
	PHONE JACK	AKN7029
KN1951	EARTH METAL FITTING	VNF1084

W REGULATOR ASSY

SEMICONDUCTORS

IC2411	AEK7003
⚠ IC2409	NJM78L05A
⚠ IC2404	NJM78M05FA
⚠ IC2403	NJM78M12FA
⚠ IC2401	NJM78M15FA
⚠ IC2405,IC2407	NJM78M56FA
⚠ IC2406	NJM79M05FA
⚠ IC2402	NJM79M15FA
⚠ Q2401	2SA1803
⚠ D2401-D2404,D2407-D2410	1SR154-400
⚠ D2418,D2419	1SR154-400
D2411	1SS355
⚠ D2415	D3SBA20(B)
D2405,D2406,D2413,D2414	RB501V-40
D2421,D2422	UDZ15B
D2420	UDZS10B
D2423,D2424	UDZS6.2B

CAPACITORS

C2446	CCSRCH101J50
C2440	CEANP470M35
C2443	CEAT101M10
C2415,C2416	CEAT101M16
C2408	CEAT101M25
C2405,C2406,C2410,C2429	CEAT221M35
C2411,C2412	CEAT222M16
C2435	CEAT2R2M50
C2401,C2402	CEAT332M35
C2442	CEAT470M50
C2441	CEAT470M63
C2436,C2439	CEAT471M16
C2433	CEAT472M16
C2451,C2452	CKSRYB102K50
C2403,C2404,C2407,C2409	CKSRYB103K50
C2413,C2414,C2428,C2434,C2453	CKSRYB103K50
C2424	CKSRYB473K50
C2444	CQMBA104J50

RESISTORS

R2403	RD1/4MUF121J
R2401	RD1/4MUF470J
Other Resistors	RS1/16S###J

OTHERS

	7P CABLE HOLDER	51048-0700
CN2401	8P JUMPER CONNECTOR	52147-0810
Y2401	BOARD IN JUMPER	ADX7420

Mark	No.	Description	Part No.
	CN2411	7P PLUG	AKP7056
	CN2404,CN2406,CN2412,CN2414	9P PLUG	AKP7057
	CN2405	15P PLUG	AKP7060
	CN2407-CN2409	17P PLUG	AKP7061
	CN2413	19P PLUG	AKP7062
	CN2410	21P PLUG	AKP7063
	CN2403	4P PLUG	KM200TA4
	CN2415	3P SOCKET	KP250NA3
	KN2401-KN2403	EARTH METAL FITTING	VNF1084

X POWER AMP-L ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC4101,IC4201,IC4301		PA9009A
⚠	IC4102,IC4202,IC4302		PBD001A
⚠	IC4103,IC4203,IC4303,IC4453		PBD002A
	Q4102,Q4202,Q4302		2SA1255
	Q4101,Q4201,Q4301		2SC3326
	D4102,D4104-D4107,D4202		1SS355
	D4204-D4207,D4302,D4304-D4307		1SS355
	D4101,D4103,D4201,D4203,D4301		UDZS10B
	D4303		UDZS10B

CAPACITORS

C4106,C4107,C4206,C4207		ACG7041
C4306,C4307		ACG7041
C4102,C4202,C4302		CCSRCH331J50
C4112,C4113,C4212,C4213		CCSRCH6R0D50
C4312,C4313		CCSRCH6R0D50
C4114,C4214,C4314		CEANPR22M50
C4103,C4203,C4303		CEAT331M10
C4401,C4402		CEAT331M63
C4108,C4109,C4208,C4209		CEAT470M16
C4308,C4309		CEAT470M16
C4104,C4105,C4204,C4205		CEAT470M63
C4304,C4305		CEAT470M63
C4110,C4111,C4210,C4211		CEHAT100M2A
C4310,C4311		CEHAT100M2A
C4101,C4201,C4301		CEHAT100M50

RESISTORS

⚠	R4131,R4132,R4231,R4232 (0.1W)	ACN7107
⚠	R4331,R4332,R4482 (0.1W)	ACN7107
⚠	R4119,R4219,R4319 (0.22W/5W)	ACN7111
	Other Resistors	RS1/16S###J

OTHERS

	Y1	LEAD WITH HOUSING	ADX7398
	Y3	LEAD WITH HOUSING	ADX7399
	Y5	LEAD WITH HOUSING	ADX7404
	CN4401	17P SOCKET	AKP7072
	CN4403	3P L TYPE PLUG	KM250MA3
	CN4456	10P PLUG	KM250NA10L
	KN4401,KN4402	EARTH METAL FITTING	VNF1084

Y POWER AMP-R ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC4151,IC4251,IC4351		PA9009A
⚠	IC4152,IC4252,IC4352,IC4452		PBD001A
⚠	IC4153,IC4253,IC4353		PBD002A
	Q4152,Q4252,Q4352		2SA1255
	Q4403,Q4404		2SC2412K
	Q4151,Q4251,Q4351		2SC3326
	D4152,D4154-D4157,D4252		1SS355
	D4254-D4257,D4352,D4354-D4357		1SS355
	D4151,D4153,D4251,D4253,D4351		UDZS10B
	D4353		UDZS10B

CAPACITORS

C4156,C4157,C4256,C4257		ACG7041
C4356,C4357		ACG7041
C4152,C4252,C4352		CCSRCH331J50
C4162,C4163,C4262,C4263		CCSRCH6R0D50
C4362,C4363		CCSRCH6R0D50
C4164,C4264,C4364		CEANPR22M50
C4153,C4253,C4353,C4405		CEAT331M10
C4403,C4404		CEAT331M63
C4158,C4159,C4258,C4259		CEAT470M16
C4358,C4359		CEAT470M16
C4154,C4155,C4254,C4255		CEAT470M63
C4354,C4355		CEAT470M63
C4160,C4161,C4260,C4261		CEHAT100M2A
C4360,C4361		CEHAT100M2A
C4151,C4251,C4351		CEHAT100M50

RESISTORS

⚠	R4181,R4182,R4281,R4282 (0.1W)	ACN7107
⚠	R4381,R4382,R4481 (0.1W)	ACN7107
⚠	R4169,R4269,R4369 (0.22W/5W)	ACN7111
	Other Resistors	RS1/16S###J

OTHERS

	Y1	LEAD WITH HOUSING	ADX7397
	Y4	LEAD WITH HOUSING	ADX7400
	Y6	LEAD WITH HOUSING	ADX7404
	CN4402	19P SOCKET	AKP7073
	CN4454	10P PLUG	KM250NA10L
	KN4403,KN4404	EARTH METAL FITTING	VNF1084

Z POWER AMP-C ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC4451		PA9009A
	Q4452		2SA1255
	Q4451		2SC3326
	D4452,D4454-D4457		1SS355
	D4451,D4453		UDZS10B

CAPACITORS

C4456,C4457		ACG7041
C4452		CCSRCH331J50
C4462,C4463		CCSRCH6R0D50
C4464		CEANPR22M50
C4453		CEAT331M10
C4458,C4459		CEAT470M16
C4454,C4455		CEAT470M63
C4460,C4461		CEHAT100M2A
C4451		CEHAT100M50

RESISTORS

⚠	R4469 (0.22W/5W)	ACN7111
	Other Resistors	RS1/16S###J

Mark No.	Description	Part No.
OTHERS		
CN4453,CN4455	10P SOCKET	KP250NA10

AA SP/PS ASSY

SEMICONDUCTORS		
Q4602,Q4603		RN1903
Q4601		RN4903
D4601-D4610		1SS355
COILS AND FILTERS		
L4601-L4607	AF CHOKE COIL	ATH1053
L4608,L4609	NOISE FILTER	RTF1167
SWITCHES AND RELAYS		
RY4601-RY4605		ASR7014
CAPACITORS		
⚠ C4621,C4622		ACH7169
C4623		CEAT101M50
C4601-C4607		CFTYA104J50
C4625-C4631		CQMBA103J50
RESISTORS		
⚠ R4621-R4627		RD1/2LMF4R7J
R4628-R4632		RD1/2VM331J
R4615,R4616		RD1/4MUF473J
⚠ R4601-R4607		RS1LMF4R7J
⚠ R4611,R4612		RS2LMF331J
Other Resistors		RS1/16S###J
OTHERS		
	6P CABLE HOLDER	51048-0600
	8P CABLE HOLDER	51048-0800
Y13	BOARD IN JUMPER	ADX7291
CN4611	8P SPEAKER TERMINAL	AKE7074
CN4612	6P SPEAKER TERMINAL	AKE7075
J4602	JUMPER WIRE 8P	D20PYY0830E
CN4610,CN4613	5P PLUG	KM200TA5

AB DIODE ASSY

SEMICONDUCTORS		
⚠ D2241,D2242		LN6SB60-4003

AC TRANS 2-1 ASSY

SEMICONDUCTORS		
⚠ IC2201,IC2202		AEK7016
Q2202		RN4903
Q2201		UN521L
⚠ D2201		S1WB(A)60SD
D2202		UDZ16B
D2207,D2208		UDZS22B
D2203-D2206,D2209-D2212		UDZS9.1B
CAPACITORS		
⚠ C2202,C2203		ACH1237
C2207,C2208		ACH7173
C2209,C2210		CEAT101M63
C2211,C2212		CEAT221M63

Mark No.	Description	Part No.
RESISTORS		
⚠ R2205,R2206		RS1LMF332J
Other Resistors		RS1/16S###J
OTHERS		
	6P CABLE HOLDER	51048-0600
	6P CABLE HOLDER	51052-0600
H2201-H2204	FUSE CLIP	AKR1004
J2201	JUMPER WIRE6P	D20PYY0615E
J10	JUMPER WIRE	D25PYY0607E

AD VH TR ASSY

SEMICONDUCTORS		
⚠ Q2232		2SA1837
⚠ Q2231		2SC4793
⚠ D2231,D2232		1SR154-400
RESISTORS		
All Resistors		RS1/16S###J
OTHERS		
CN2231	6P L TYPE CONNECTOR	KPD6L

AE TRANS 2-2 ASSY

SEMICONDUCTORS		
⚠ IC2251,IC2252		AEK7016
⚠ IC2253		AEK7019
CAPACITORS		
C2251-C2253		CQMBA104J50
RESISTORS		
⚠ R2252		RD1/4MUF100J
OTHERS		
	7P CABLE HOLDER	51048-0700

AF TRANS 1 ASSY

TRANS 1 Assy has no service parts.

AG PRIMARY ASSY

SEMICONDUCTORS		
⚠ IC2001		NJM78M56FA
Q2001		KRC101M
D2002,D2004,D2005		1SS355
⚠ D2001		S1WB(A)60SD
D2003		UDZS5.1B
COILS AND FILTERS		
⚠ L2001	LINE FILTER	ATF7018
L2002,L2003	FERRITE BEAD	VTH1013
TRANSFORMERS		
⚠ T2001		ATT7043
SWITCHES AND RELAYS		
⚠ RY2001		ASR7025
CAPACITORS		
⚠ C2001,C2002		ACE7013
⚠ C2003		ACG7033

Mark	No.	Description	Part No.
	C2008		CEAT102M25
	C2009		CEAT221M25
	C2005-C2007,C2011,C2012		CKSRYB103K50
	C2004		CQMA103J50

RESISTORS

⚠	R2001 (2.2MW, 1/2W)		RCN1080
	R2002		RD1/2VM101J
	Other Resistors		RS1/16S###J

OTHERS

	CN2002	11P FFC CONNECTOR	52045-1145
⚠	2004	1P AC OUTLET	AKP1033
	H2001,H2002	FUSE CLIP	AKR7001
	CN2003,CN2004	5P SOCKET	KP200TA5L
⚠	CN2001	AC CORD SOCKET	RKP1751
		SCREW TERMINAL	VNE1948
	KN2001	EARTH METAL FITTING	VNF1084

6. ADJUSTMENT

■ AM Tuner Section

• There is no adjustment in the AM tuner.

■ FM Tuner Section

• Set the mode selector to FM BAND.
• Connect the wiring as shown in Fig. 1.

Step No.	Adjustment Title	ANT. Input level and signal condition			Adjustment	
		Frequency (MHz)	Modulation	Input Level (dBμV)	Adjust point	Contents
1	T-METER Adjustment	98	OFF	80	L201	Adjust L201 so that the DC voltage between Pin 21 and Pin 23 of IC201 (Test point Vtm) gets within 0 ± 50mV.

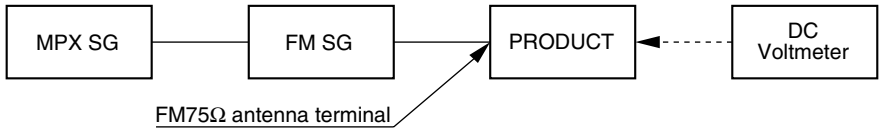


Fig.1 Adjustment Wiring Diagram

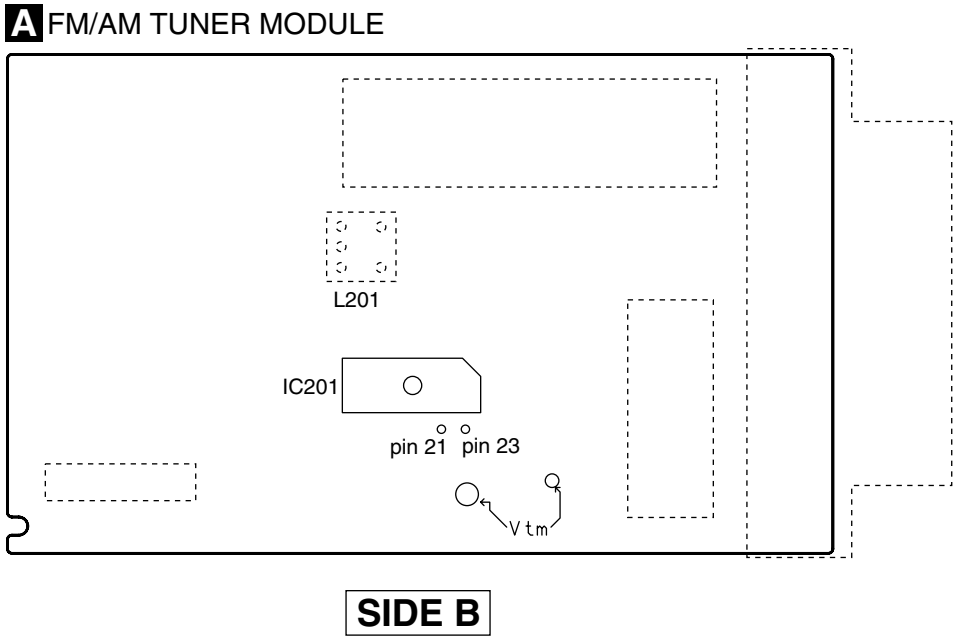


Fig.2 Adjustment Point

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 PROTECTION CIRCUIT CONTROL SPECIFICATION

Microcomputer-related ports

FAN_DRIVE (Expansion IC) : For Fan on/off
TEMP_IN (pin 94)
Input port (A/D) : To detect temperature
FAN_STOP (pin 95)
Input port : To detect Fan forced stop
OL_DET (pin 73)
Input port : To detect overloading at the amplifier (Interrupt port)
DC_DET (pin 63)
Input port : For DC detection

The following control processes are activated immediately before the relay system is turned on upon power-on. The time is 4.8 seconds after power-on. (Control of the relay system is enabled 5.2 seconds after power-on.)
Only DC detection is enabled 2 seconds after power-on to activate it before other protection functions.

① Thermal and Fan detection, and Fan control

1) Thermal detection and Fan control

Valid with American and Japanese models only.

TEMPIN (V)	Temperature (°C)	Fan	Remarks
More than 4.10	More than 125	ON	Mute ON & speaker relay OFF : The warning indication "OVERHEAT"
3.83 to 4.09	110 to 125	ON	Leading hold
2.91 to 3.82	80 to 110	ON	Mute OFF & speaker relay ON : Normal mode
2.58 to 2.90	70 to 80	Leading hold	
Less than 2.52	Less than 70	OFF	

Valid with European and other general-area models only.

TEMPIN (V)	Temperature (°C)	Fan	Remarks
More than 3.58	More than 100	ON	Mute ON & speaker relay OFF : The warning indication "OVERHEAT"
3.30 to 3.57	90 to 100	ON	Leading hold
2.91 to 3.29	80 to 90	ON	Mute OFF & speaker relay ON : Normal mode
2.53 to 2.90	70 to 80	Leading hold	
Less than 2.52	Less than 70	OFF	

* By poor contact of Thermistor and alien substance mixture, there are the following cases displayed FL.
Become STBY after having done flushing with "THDCT NG" for three seconds.
By opening of thermistor junction or energization in very cold place (less than -15°C),TEMP line becomes high impedance. And when TEMP port became equal to or less than 0.1V.

2) Fan detection

If the fan is forcibly stopped, the FAN_DET port becomes "L"
Detecting "L" the microcomputer performs the following operations:
1. System muting on
2. Protection relays off

The warning indication "FAN STOP" appears (flashing) on the FL display.
If this status continues for more than 3 seconds, the power is turned off (for Standby mode).
If the port becomes "H" within 3 seconds, the unit resets automatically.
FAN_DET port performs the chattering check for 7 msec.
In addition, there is the case that detection delays for maximum 20 msec because performs monitor of FAN_DET port with a main loop.

② Overload detection (abnormality detection)

If the speaker terminals are short-circuited or low-load driving is detected, the OL_DET port becomes "L"
Detecting "L" edge interrupt in an interrupt process, the microcomputer performs the following operations:
1. System muting on
2. Speaker relay off (Control with the display microcomputer)
3. Power off (Standby mode)

③ DC detection (defect detection)

Only DC detection is enabled 2 seconds after power-on.
If there is a fault in the power amplifier or a high-level signal lower than5 Hz is input, the DC_DET port becomes "L"
Detecting "L" the microcomputer performs the following operations:
1. System muting on
2. Speaker relay off (Control with the display microcomputer)

The warning indication "AMP ERR" appears on the FL display.

If this status continues for more than 3 seconds, the power is turned off (for Standby mode) and flashes the standby LED.
Do not accept the key input afterward.
(Flash it always till turns the primary side off.)
If the port becomes "L" within 3 seconds, the unit resets automatically.

DC_DET port performs the chattering check for 1 msec.
In addition, there is the case that detection delays for maximum 20 msec because performs monitor of DC_DET port with a main loop.
Even if turns the primary side off and turns on once again, standby LED flashes as it is.
If detects DC once and turned the power off, do not accept the key input afterward.
However, power on is possible when the following key was pressed to be able to key input in the protection line and service.
1. Test mode (remote control code : A55F)
2. When the STEREO/DIRECT key and SIGNAL SELECT key are both held pressed for 2 seconds.
(Be effective when turned the power off by DC detection regarding 2.)

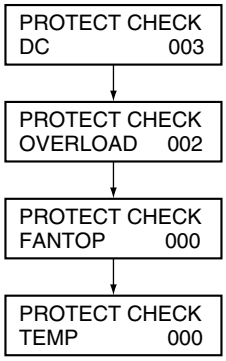
④ Diagnostic mode

This mode is only for servicing and checking the circuit design, and not open to users.
When the STEREO/DIRECT key and TONE + key are both held pressed for 2 seconds in Standby mode, the power is turned on, and the number of times of each defect or Speaker relay off by abnormality detection is sequentially displayed on the FL display.

Displayed items:

- DC detection
- Overload detection
- Fan detection
- Temperature detection

Hold the STEREO/DIRECT key and TONE + key pressed for 2 seconds in Standby mode.



When the MULTI CH IN key and TONE – key are both held pressed for 2 seconds in standby mode, all clear the counter for detection.

● Protection Process List

Item	Purpose	Detection Method	Process	Warning Indication	Remarks
DC detection	To detect amplifier damage (defect status) A process to protect speakers (for protection of connected external devices)	Detects when the DC_DET port becomes "L".	Turns muting on and speaker relay off, then turns off the power after 3 seconds.	Flashing "AMP ERR" for 3 seconds. Flash the standby LED after the power off.	Once detected and turned the power off, input a key never again.
AMP overload	To detect overloading (abnormal status) With low-load driving or a short circuit of the speaker terminals (for protection of the amplifier)	Detects when the AMP_OL port becomes "L" (checks by interrupt).	Turns muting on and speaker relay off, and immediately turns off the power.	None	
Fan control	Protection function against a temperature rise at the heat sink	HY, F : Detect temperature more than 100°C. KU, J : Detect temperature more than 125°C.	Turns muting on and speaker relay off. Rotate the fan	Continue flasing with "OVERHEAT"	
		HY, F : Detect temperature of 90 to 100°C. KU, J : Detect temperature of 110 to 125°C.	Rotate the fan		Mute, relay and warning indications is leading hold.
		HY, F : Detect temperature of 80 to 90°C. KU, J : Detect temperature of 80 to 110°C.	Rotate the fan		Mute off & relay on (normal mode)
		Detect temperature of 70 to 80°C.	Fan is leading hold		
		A condition except the above.	Stop the fan		
Fan stop	To know that the rotating fan is forcibly stopped	Detects when the FAN_DET port becomes "L".	Turns muting on and speaker relay off, then turns off the power after 3 seconds.	Flashing "FAN STOP" for 3 seconds	If the FAN_DET port becomes "H" within 3 seconds, the unit resets automatically. After the power off, the key input is possible once again.

7.1.2 DIAGNOSTICS OF AMPLIFIER SECTION

When DC detection worked (STBY IND. flashes for a long time) in the protection circuit of foregoing section (or there is not the speaker output, probably only 1CH), failure (damage) of the power amplifier section is considered.

Because this receiver cannot diagnose the amplifier section by an electricity state by structure, please diagnose it in the following steps.

Caution:
When release the STBY (flashes) state before repair, Because there is the case that the damage progresses when turns the power on once again, please be careful.

- According to a symptom, perform the following confirmation beforehand.

1. Are not Fuse and IC protector opening it?
2-a. When can turn on electricity, confirm that supply voltage of the point that can measure is appropriate.
2-b. Furthermore, confirm that voltage ((in a no signal) DC and the appropriate signal output) between GND and R4621-4627 (Either of the amplifier side and the speaker terminal side is possible) (Or remove either of CN4601-4604). And limit failure CH.

If was able to limit failure CH, diagnose the CH in the following steps.

- **Use the tester basically and check that each part is not damaged (resistance value / open / short circuit).**

About parts with damaged possibility, explain FL ch to an example in order.

1. R4131, 4132 (ACN7107: 0.1 Ω, 1W chip drain resistor)
   IC 4102, 4103
   (PBD001A: Nch, PBD002A: Pch output POWER MOS Tr.)

2. R4119 (ACN7111: 0.22 Ω .5W ×2 cement source resistor)
   R4117, 4118
   (RS1/16S471J: 470 Ω chip resistor for protection circuit)
   D4101, 4103
   (UDZS10B: 10V Zener diode for current limiting)
   D4102, 4104 (1SS355: Small signal diodes same as above)
   R4110, 4111 (RS1/16S560J: 56 Ω chip gate resistor)
   R4106, 4107
   (RS1/16S101J:100 Ω chip IC4101 power filter resistor)

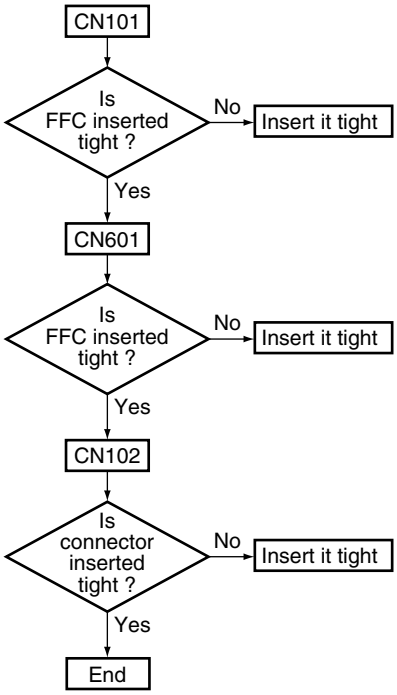
3. IC4101 (PA9009A: Power amplifier with output current bias Voltage step HIC)
   IC4701, 4702
   (AEK7023: 200mA IC protector /FAN CONNECTION Assy)

4. Q2231, 2232 (2SC4793,2SA1837 TO-220 Tr. /VH TR Assy)

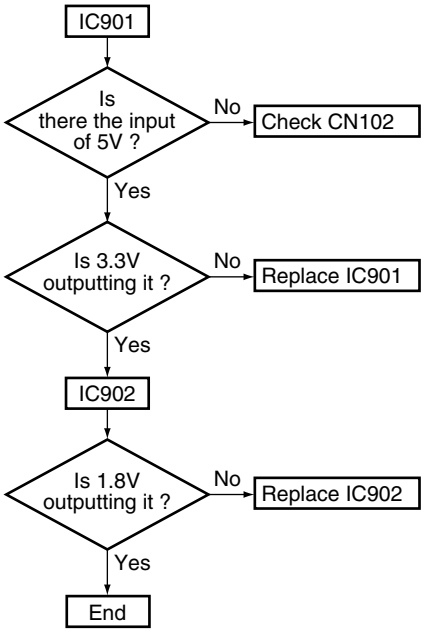
7.1.3 TROUBLE SHOOTING

- When a sound is not out in the surround mode with the digital signal input.
- Suppose CR to be poor contact and that is not damaged.
- This shows failure analysis of DSP Assy.

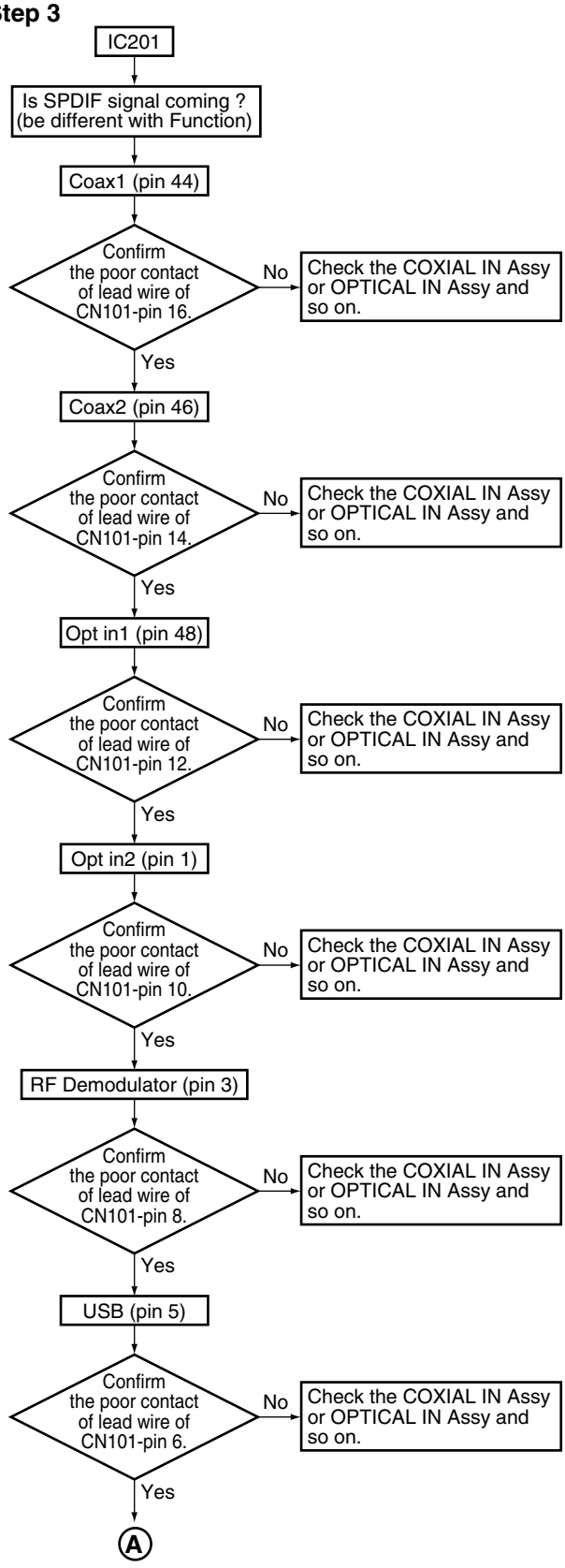
Step 1

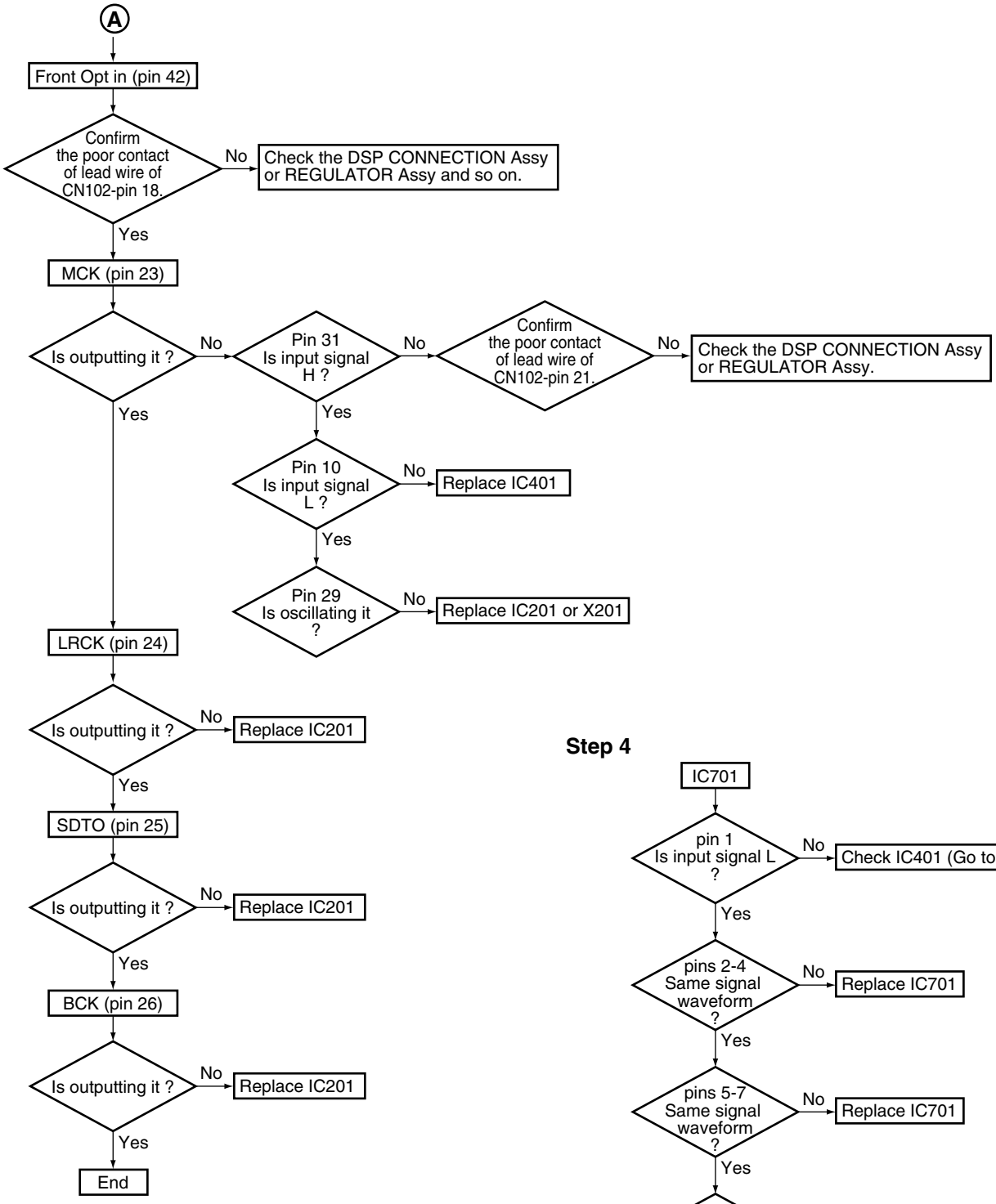


Step 2

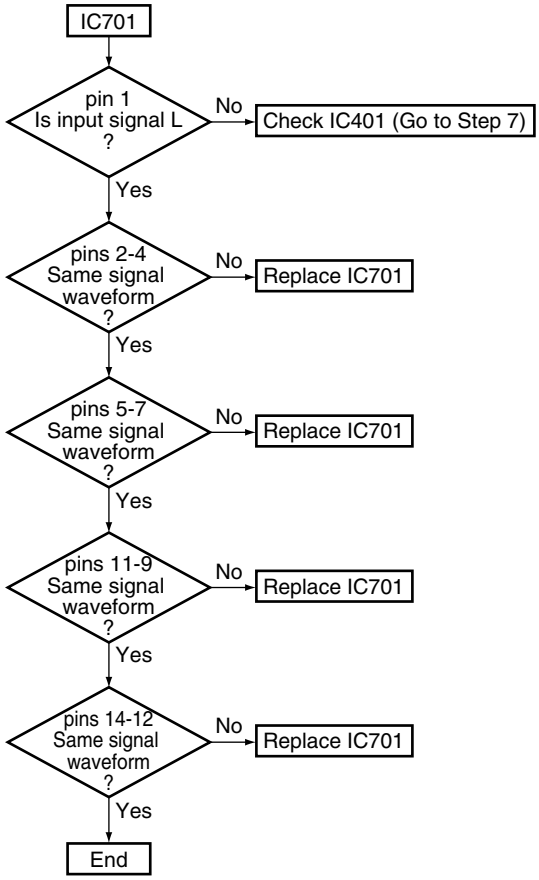


Step 3

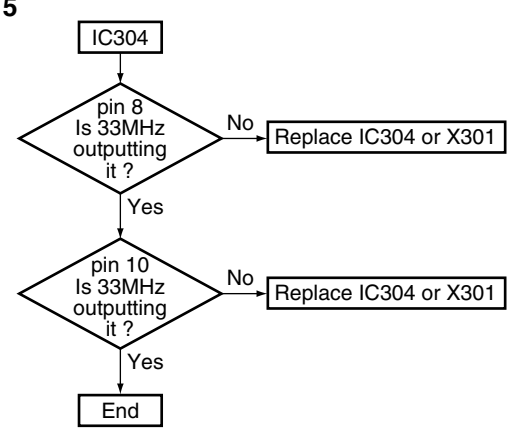

IC201
Is SPDIF signal coming ? (be different with Function)
Coax1 (pin 44)
Confirm the poor contact of lead wire of CN101-pin 16.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
Coax2 (pin 46)
Confirm the poor contact of lead wire of CN101-pin 14.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
Opt in1 (pin 48)
Confirm the poor contact of lead wire of CN101-pin 12.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
Opt in2 (pin 1)
Confirm the poor contact of lead wire of CN101-pin 10.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
RF Demodulator (pin 3)
Confirm the poor contact of lead wire of CN101-pin 8.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
USB (pin 5)
Confirm the poor contact of lead wire of CN101-pin 6.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
A


A
Front Opt in (pin 42)
Confirm the poor contact of lead wire of CN102-pin 18.
No
Check the DSP CONNECTION Assy or REGULATOR Assy and so on.
Yes
MCK (pin 23)
Is outputting it ?
No
Pin 31 Is input signal H ?
No
Confirm the poor contact of lead wire of CN102-pin 21.
No
Check the DSP CONNECTION Assy or REGULATOR Assy.
Yes
Yes
Pin 10 Is input signal L ?
No
Replace IC401
Yes
Pin 29 Is oscillating it ?
No
Replace IC201 or X201
LRCK (pin 24)
Is outputting it ?
No
Replace IC201
Yes
SDTO (pin 25)
Is outputting it ?
No
Replace IC201
Yes
BCK (pin 26)
Is outputting it ?
No
Replace IC201
Yes
End

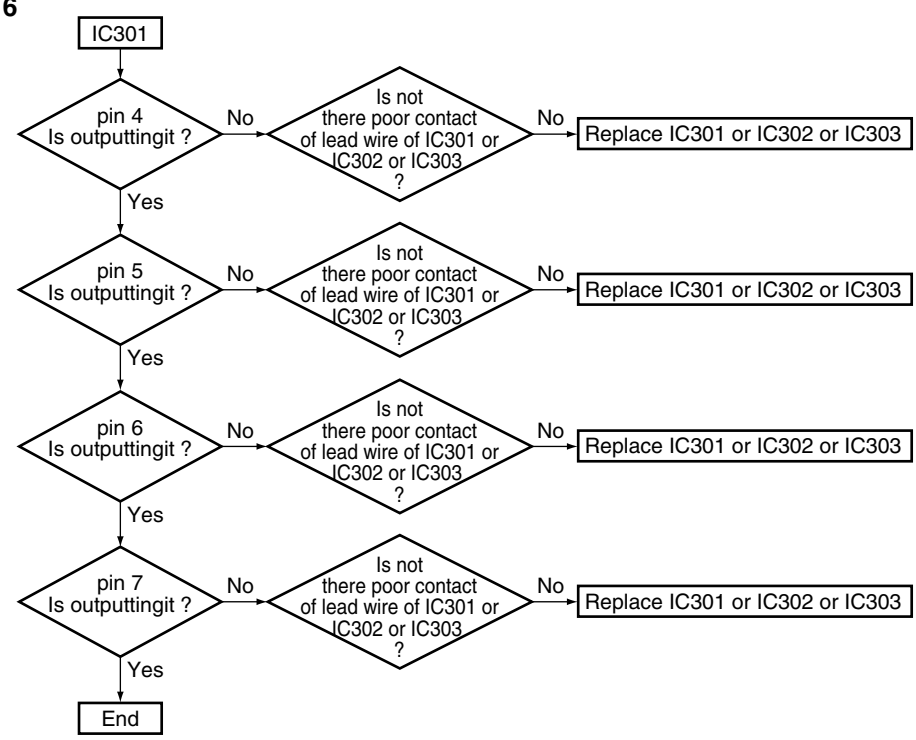
Step 4


IC701
pin 1 Is input signal L ?
No
Check IC401 (Go to Step 7)
Yes
pins 2-4 Same signal waveform ?
No
Replace IC701
Yes
pins 5-7 Same signal waveform ?
No
Replace IC701
Yes
pins 11-9 Same signal waveform ?
No
Replace IC701
Yes
pins 14-12 Same signal waveform ?
No
Replace IC701
Yes
End

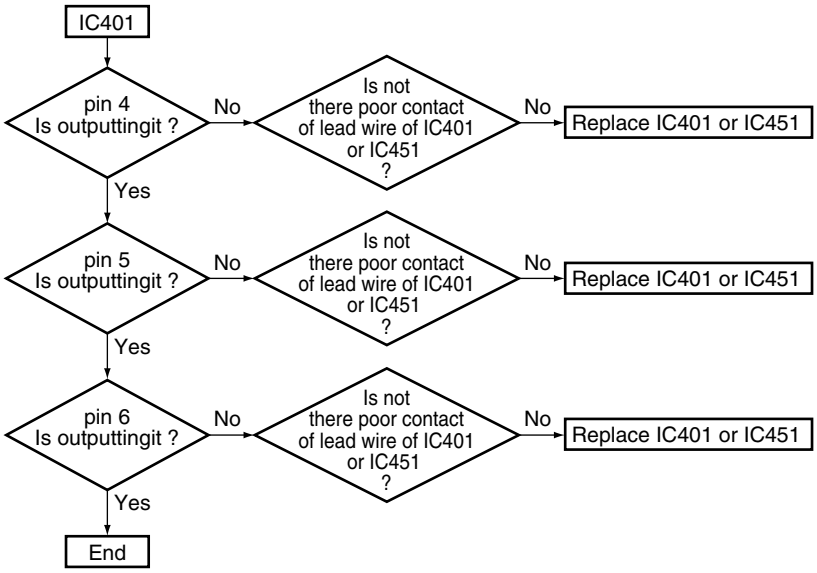
Step 5



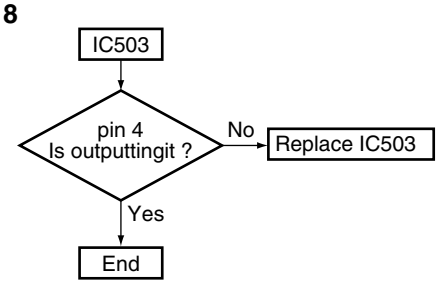
Step 6


IC301
pin 4 Is outputtingit ?
No
Is not there poor contact of lead wire of IC301 or IC302 or IC303 ?
No
Replace IC301 or IC302 or IC303
Yes
pin 5 Is outputtingit ?
No
Is not there poor contact of lead wire of IC301 or IC302 or IC303 ?
No
Replace IC301 or IC302 or IC303
Yes
pin 6 Is outputtingit ?
No
Is not there poor contact of lead wire of IC301 or IC302 or IC303 ?
No
Replace IC301 or IC302 or IC303
Yes
pin 7 Is outputtingit ?
No
Is not there poor contact of lead wire of IC301 or IC302 or IC303 ?
No
Replace IC301 or IC302 or IC303
Yes
End

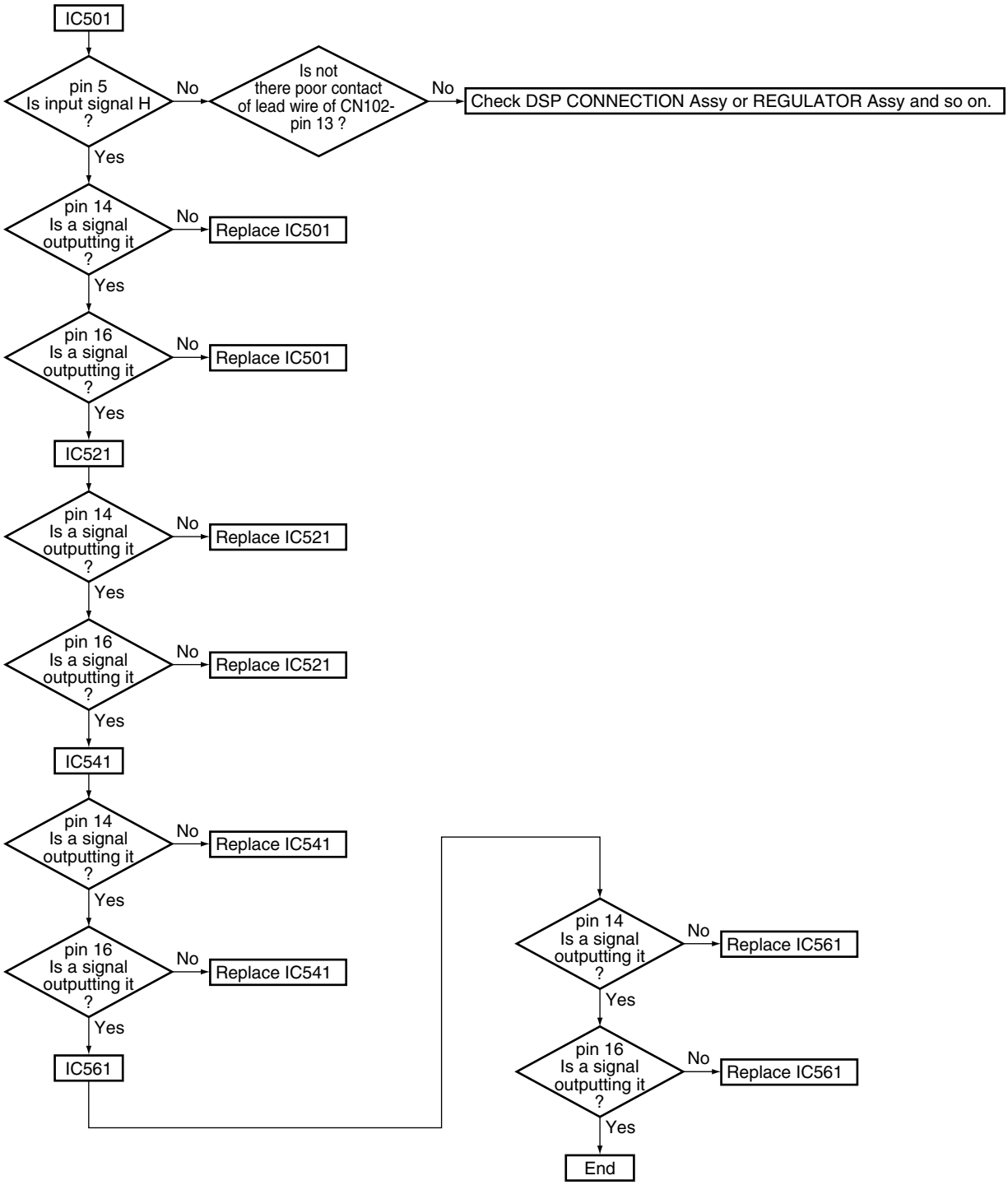
Step 7



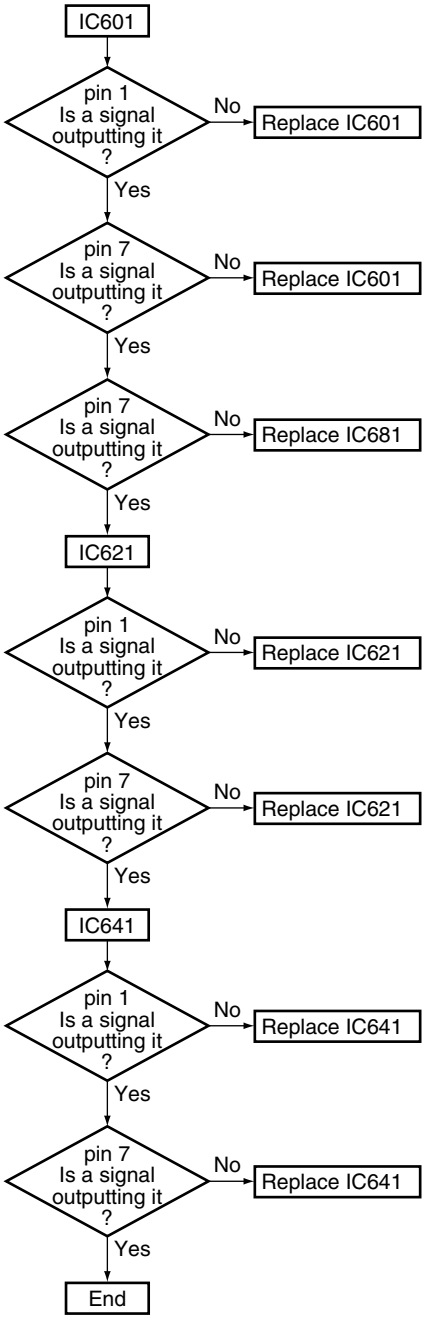
Step 8


IC503
pin 4
Is outputtingit ?
No
Replace IC503
Yes
End

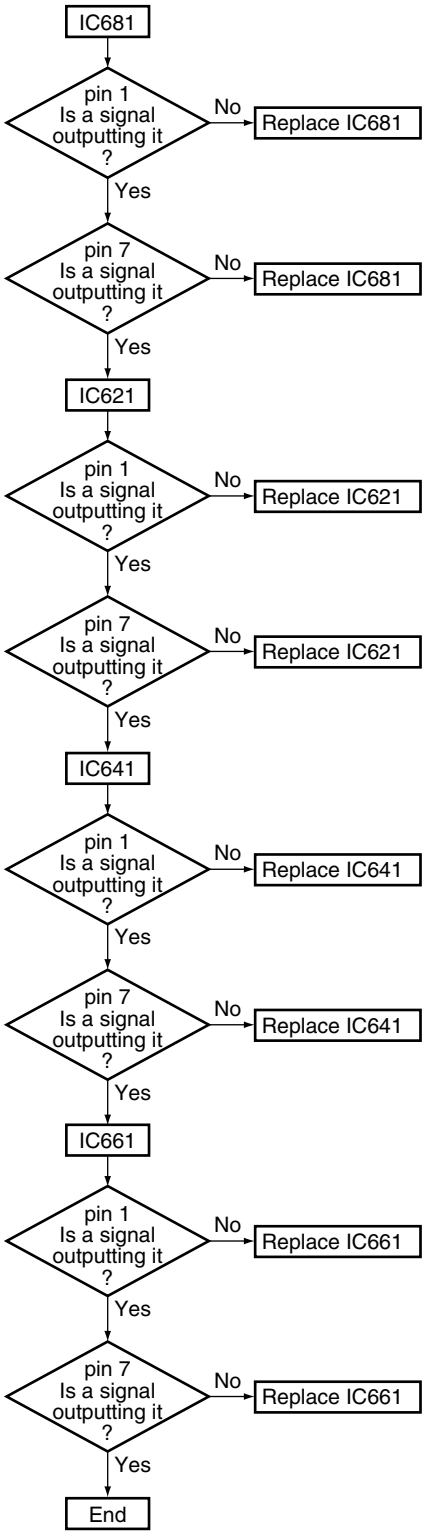
Step 9


IC501
pin 5
Is input signal H
?
No
Is not
there poor contact
of lead wire of CN102-
pin 13 ?
No
Check DSP CONNECTION Assy or REGULATOR Assy and so on.
Yes
pin 14
Is a signal
outputting it
?
No
Replace IC501
Yes
pin 16
Is a signal
outputting it
?
No
Replace IC501
Yes
IC521
pin 14
Is a signal
outputting it
?
No
Replace IC521
Yes
pin 16
Is a signal
outputting it
?
No
Replace IC521
Yes
IC541
pin 14
Is a signal
outputting it
?
No
Replace IC541
Yes
pin 16
Is a signal
outputting it
?
No
Replace IC541
Yes
IC561
pin 14
Is a signal
outputting it
?
No
Replace IC561
Yes
pin 16
Is a signal
outputting it
?
No
Replace IC561
Yes
End

Step 10



Step 11

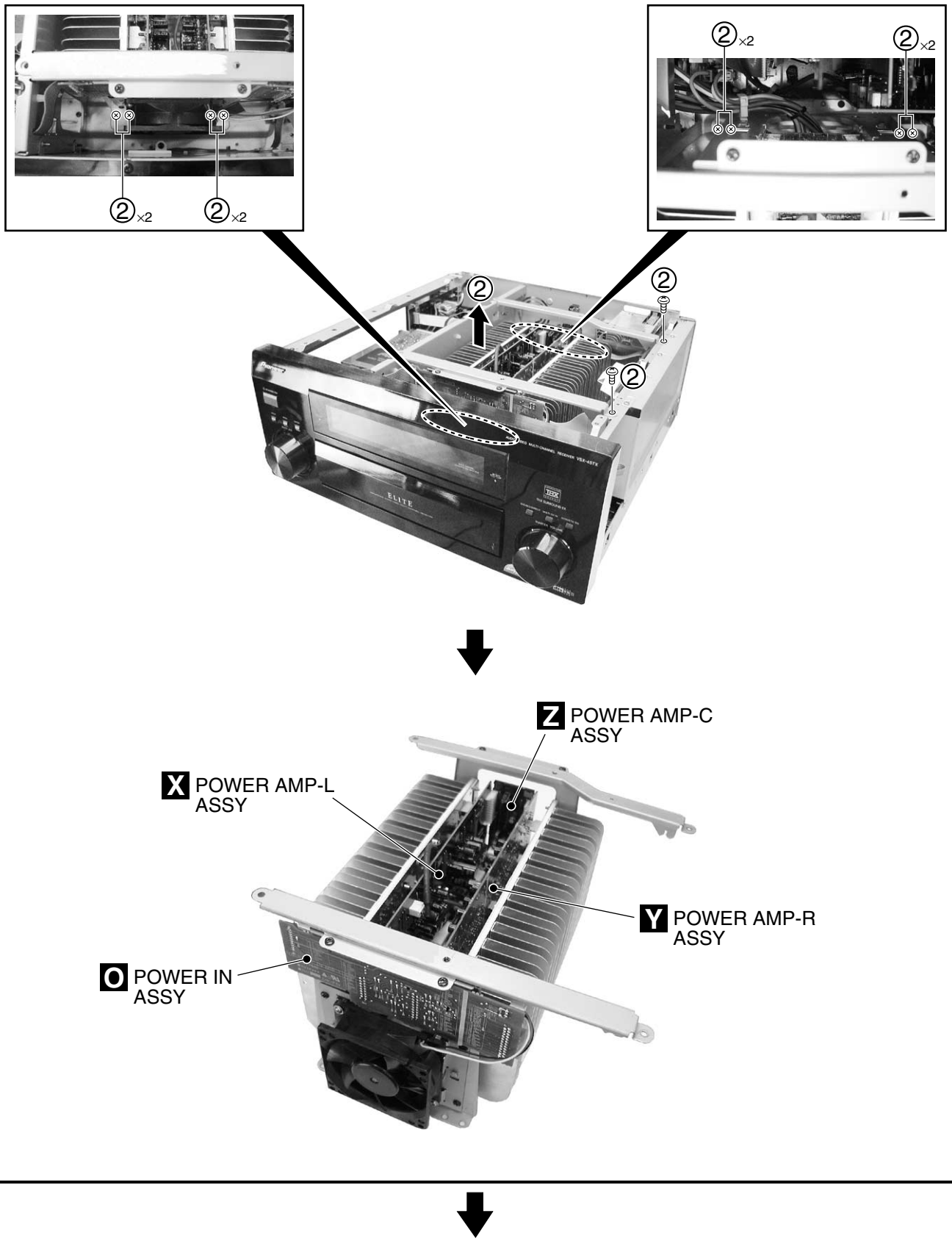


7.1.4 DISASSEMBLY

1 Bonnet and Heat Sink Block

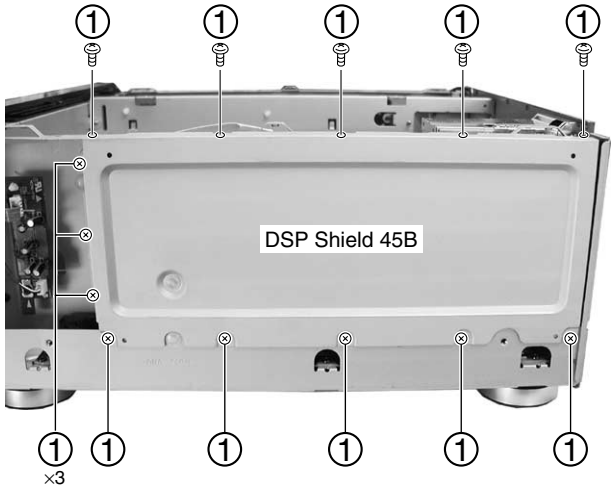
① Remove the bonnet case (screws × 23)

② Remove the heat sink block (screws × 10, connectors × 8)

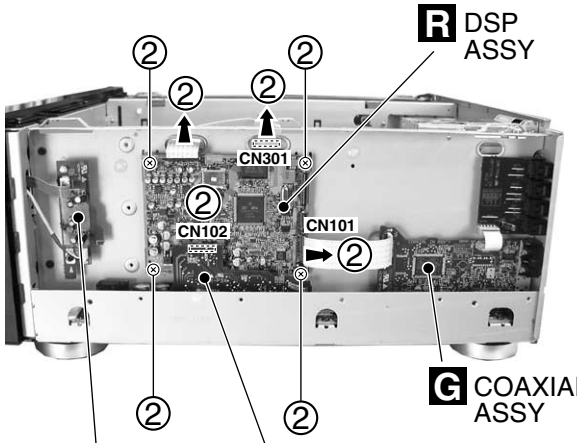


2 DSP Block

① Remove the DSP shield 45B (screws × 13)

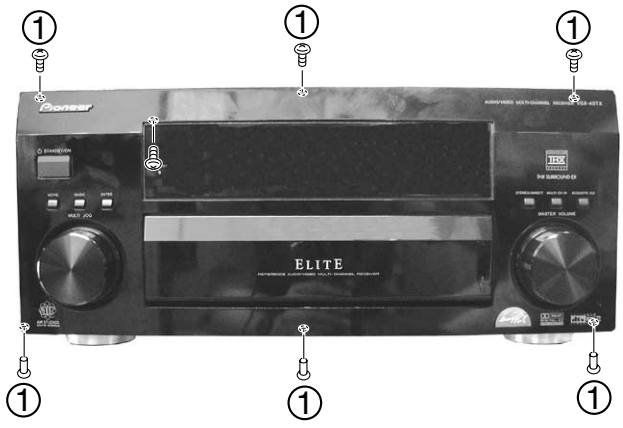


② Remove the DSP ASSY
(screws × 4, connectors × 4)



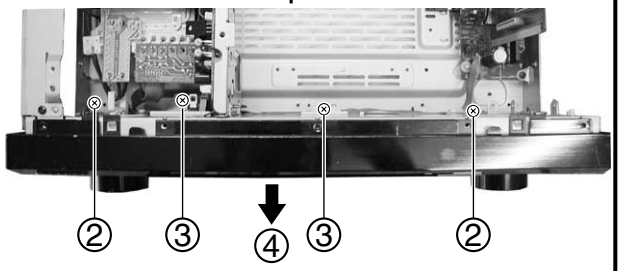
3 Front Panel Block

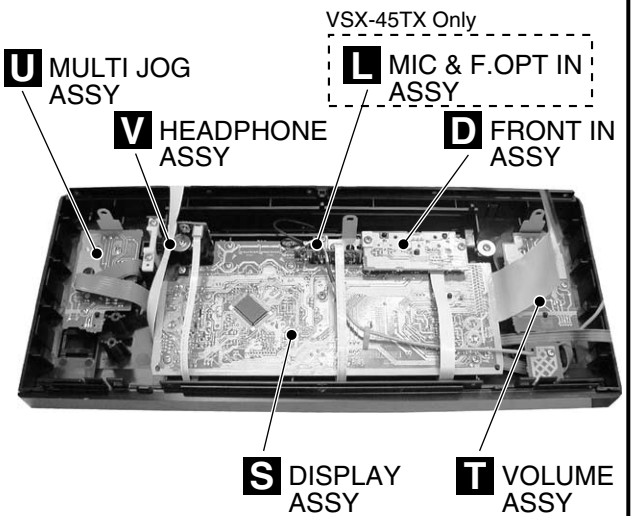
① Remove six screws



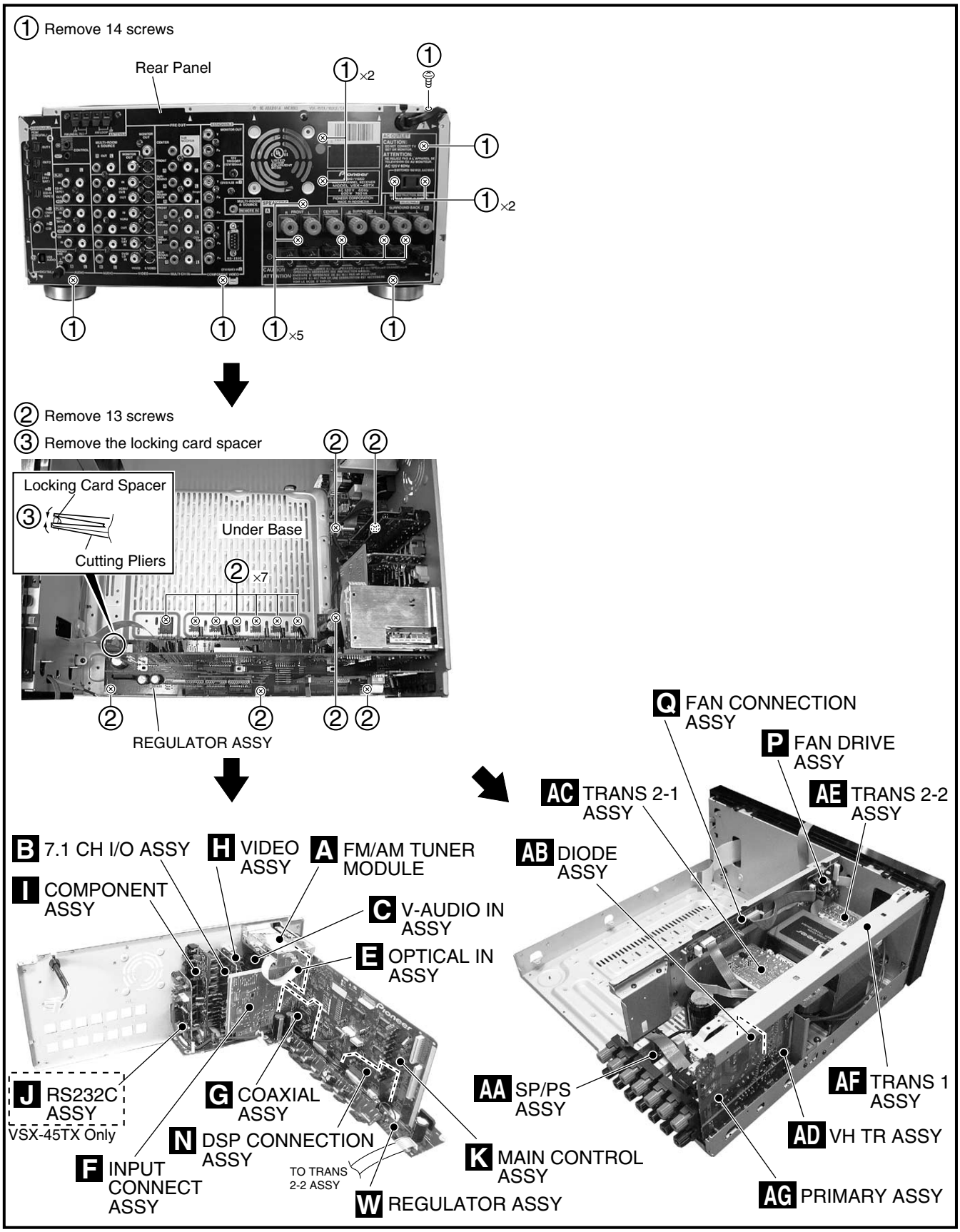
② Remove two screws
③ Remove two screws
④ Remove the front panel block

● Top View





4 Rear Panel Block



7.2 PARTS

7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

● List of IC

PDSPC56367PV150, PD5770A8, PD5771A, BU4094BCF, PCM2902EG

■ DSPC56367PV150 (DSP ASSY: IC301)

• DSP Microcomputer

● Pin Function

No.	Pin Name	I/O	Function
1	SCK1	I	Microcomputer communication clock
2	SS	I	Microcomputer communication chip select
3	HREQ	O	Microcomputer communication request
4	SDO0	O	Digital audio data (Front L/R)
5	SDO1	O	Digital audio data (Surround L/R)
6	SDO2	O	Digital audio data (Center/Subwoofer)
7	SDO3	O	Digital audio data (Front L/R)
8	VCCS	–	Interface power supply (3.3V)
9	GNDS	–	Interface GND
10	SDI1	I	Digital audio data (Front L/R)
11	SDI0	I	Digital audio data (Surround L/R)
12	FST	O	Digital audio LR clock
13	FSR	I	Digital audio LR clock
14	SCKT	O	Digital audio Bit clock
15	SCKR	I	Digital audio Bit clock
16	HCKT	I	Digital audio master clock
17	HCKR	I	Digital audio master clock
18	VCCQL	–	Quiet core power supply (1.8V)
19	GNDQ	–	Quiet GND
20	VCCQH	–	Quiet external power supply (3.3V)
21	HDS	I	Host data strobe
22	HRW	I	Host write data
23	HACK	I	Host acknowledge
24	HOREQ	O	Host request
25	VCCS	–	Interface power supply (3.3V)
26	GNDS	–	Interface GND
27	ADO	O	Digital audio data output
28	ACI	I	Digital audio master clock input
29	TIO0	I	Timer input
30	HCS	I	Host chip select
31	HA9	O	General-purpose port
32	HA8	O	DSP master switch
33	HAS	O	General-purpose port
34	HAD7	O	General-purpose port
35	HAD6	O	General-purpose port
36	HAD5	O	General-purpose port
37	HAD4	O	General-purpose port
38	VCCH	–	Host power supply (3.3V)
39	GNDH	–	Host GND
40	HAD3	O	General-purpose port
41	HAD2	O	General-purpose port
42	HAD1	O	General-purpose port
43	HAD0	O	General-purpose port
44	RESET	I	Reset
45	VCCP	–	PLL power supply (1.8V)
46	PCAP	I	PLL capacitor connection pin
47	GNDP	–	PLL GND
48	SDI0_1	I	Digital audio data (Surroundback L/R)

No.	Pin Name	I/O	Function
49	VCCQH	–	Quiet external power supply (3.3V)
50	FST_1	I	Digital audio LR clock
51	AA2	O	External memory chip select
52	CAS	O	Column address
53	SCKT_1	I	Digital audio Bit clock
54	GNDQ	–	Quiet GND
55	EXTAL	I	External clock input
56	VCCQL	–	Quiet core power supply (1.8V)
57	VCCC	–	Bus control power supply (3.3V)
58	GNDC	–	Bus control GND
59	FSR_1	O	Digital audio LR clock
60	SCKR_1	O	Digital audio Bit clock
61	PINIT	I	PLL initial pin
62	TA	I	Transfer acknowledge
63	BR	O	Bus request
64	BB	I	Bus busy
65	VCCC	–	Bus control power supply (3.3V)
66	GNDC	–	Bus control GND
67	WR	O	External memory read enable
68	RD	O	External memory write enable
69	AA1	O	Address control (Not used)
70	AA0	O	Address control (Not used)
71	BG	O	Bus control
72	A0	O	External memory address
73	A1	O	External memory address
74	VCCA	–	Address bus power supply (3.3V)
75	GNDA	–	Address bus GND
76	A2	O	External memory address
77	A3	O	External memory address
78	A4	O	External memory address
79	A5	O	External memory address
80	VCCA	–	Address bus power supply (3.3V)
81	GNDA	–	Address bus GND
82	A6	O	External memory address
83	A7	O	External memory address
84	A8	O	External memory address
85	A9	O	External memory address
86	VCCA	–	Address bus power supply (3.3V)
87	GNDA	–	Address bus GND
88	A10	O	External memory address
89	A11	O	External memory address
90	GNDQ	–	Quiet GND
91	VCCQL	–	Quiet core power supply (1.8V)
92	A12	O	External memory address
93	A13	O	External memory address
94	A14	O	External memory address
95	VCCQH	–	Quiet external power supply (3.3V)
96	GNDA	–	Address bus GND

No.	Pin Name	I/O	Function
97	A15	O	External memory address
98	A16	O	External memory address
99	A17	O	External memory address
100	D0	I/O	External memory data
101	D1	I/O	External memory data
102	D2	I/O	External memory data
103	VCCD	–	Data bus power supply (3.3V)
104	GNDD	–	Data bus GND
105	D3	I/O	External memory data
106	D4	I/O	External memory data
107	D5	I/O	External memory data
108	D6	I/O	External memory data
109	D7	I/O	External memory data
110	D8	I/O	External memory data
111	VCCD	–	Data bus power supply (3.3V)
112	GNDD	–	Data bus GND
113	D9	I/O	External memory data
114	D10	I/O	External memory data
115	D11	I/O	External memory data
116	D12	I/O	External memory data
117	D13	I/O	External memory data
118	D14	I/O	External memory data
119	VCCD	–	Data bus power supply (3.3V)
120	GNDD	–	Data bus GND
121	D15	I/O	External memory data
122	D16	I/O	External memory data
123	D17	I/O	External memory data
124	D18	I/O	External memory data
125	D19	I/O	External memory data
126	VCCQL	–	Quiet core power supply (1.8V)
127	GNDQ	–	Quiet GND
128	D20	I/O	External memory data
129	VCCD	–	Data bus power supply (3.3V)
130	GNDD	–	Data bus GND
131	D21	I/O	External memory data
132	D22	I/O	External memory data
133	D23	I/O	External memory data
134	MODD	I	Mode select D
135	MODC	I	Mode select C
136	MODB	I	Mode select B
137	MODA	I	Mode select A
138	SDI1_1	I	Digital audio data (Center/Subwoofer)
139	TDO	O	JTAG data output
140	TDI	I	JTAG data input
141	TCK	I	JTAG test clock
142	TMS	I	JTAG mode select
143	MOSI	I	Microcomputer communication data input
144	MISO	O	Microcomputer communication data output

■ DSPC56367PV150 (DSP ASSY: IC401)

• DSP Microcomputer

● Pin Function

No.	Pin Name	I/O	Function
1	SCK1	I	Microcomputer communication clock
2	SS	I	Microcomputer communication chip select
3	HREQ	O	Microcomputer communication request
4	SDO0	O	Digital audio data (Front L/R)
5	SDO1	O	Digital audio data (Surround L/R)
6	SDO2	O	Digital audio data (Center/Subwoofer)
7	SDO3	O	Digital audio data (Front L/R)
8	VCCS	–	Interface power supply (3.3V)
9	GNDS	–	Interface GND
10	SDI1	I	Digital audio data (Front L/R)
11	SDI0	I	Digital audio data (Surround L/R)
12	FST	O	Digital audio LR clock
13	FSR	I	Digital audio LR clock
14	SCKT	O	Digital audio Bit clock
15	SCKR	I	Digital audio Bit clock
16	HCKT	I	Digital audio master clock
17	HCKR	I	Digital audio master clock
18	VCCQL	–	Quiet core power supply (1.8V)
19	GNDQ	–	Quiet GND
20	VCCQH	–	Quiet external power supply (3.3V)
21	HDS	I	Host data strobe
22	HRW	I	Host write data
23	HACK	I	Host acknowledge
24	HOREQ	O	Host request
25	VCCS	–	Interface power supply (3.3V)
26	GNDS	–	Interface GND
27	ADO	O	Digital audio data output
28	ACI	I	Digital audio master clock input
29	TIO0	I	Timer input
30	HCS	I	Host chip select
31	HA9	O	General-purpose port
32	HA8	O	General-purpose port
33	HAS	O	General-purpose port
34	HAD7	O	General-purpose port
35	HAD6	O	General-purpose port
36	HAD5	O	General-purpose port
37	HAD4	O	General-purpose port
38	VCCH	–	Host power supply (3.3V)
39	GNDH	–	Host GND
40	HAD3	O	DVD-A switch
41	HAD2	O	DIR oscillation stop
42	HAD1	O	LSSN modxe (LFE addition)
43	HAD0	O	Analog mode
44	RESET	I	Reset
45	VCCP	–	PLL power supply (1.8V)
46	PCAP	I	PLL capacitor connection pin
47	GNDP	–	PLL GND
48	SDI0_1	I	Digital audio data (Surroundback L/R)

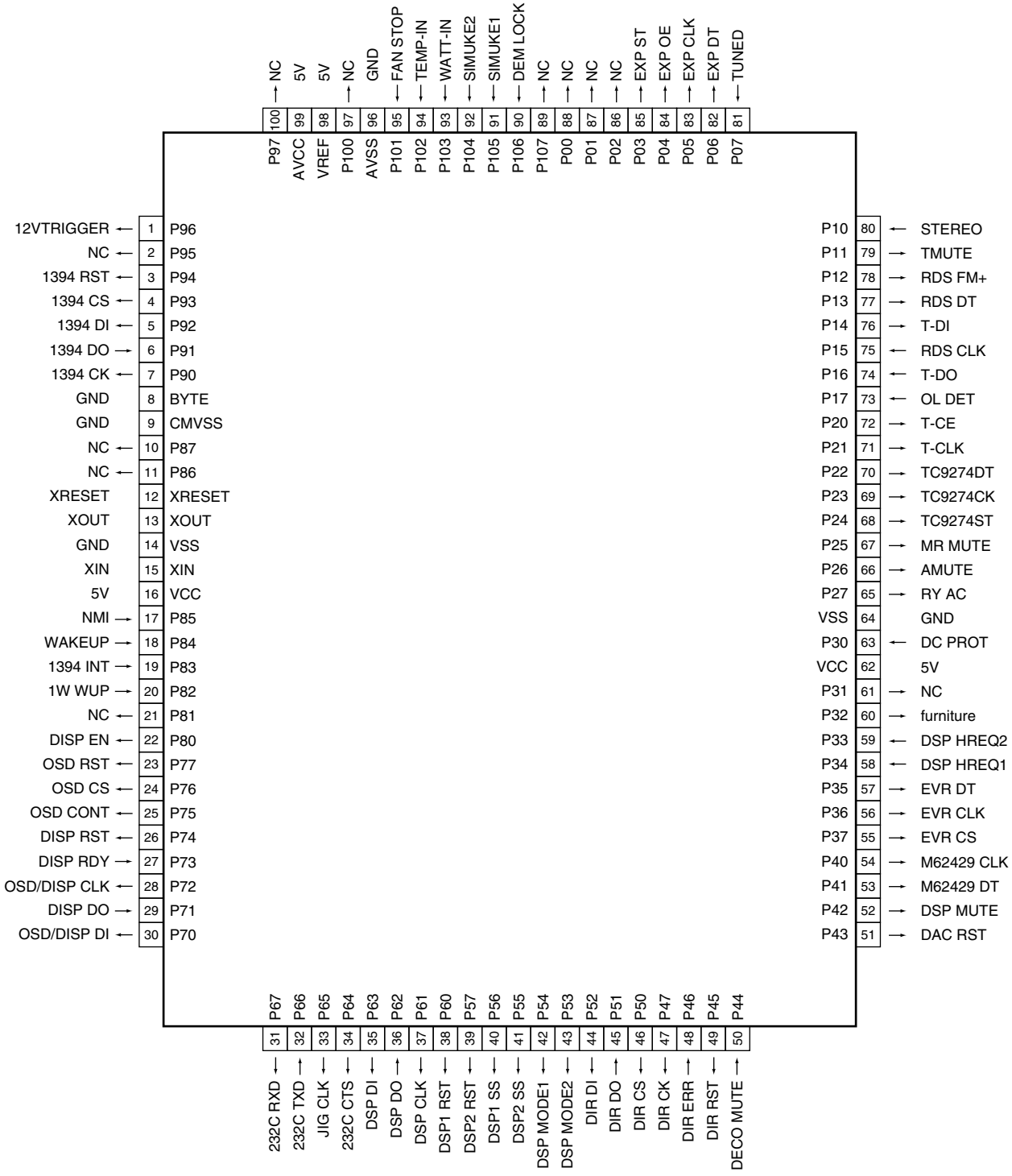
No.	Pin Name	I/O	Function
49	VCCQH	–	Quiet external power supply (3.3V)
50	FST_1	I	Digital audio LR clock
51	AA2	O	External memory chip select
52	CAS	O	Column address
53	SCKT_1	I	Digital audio Bit clock
54	GNDQ	–	Quiet GND
55	EXTAL	I	External clock input
56	VCCQL	–	Quiet core power supply (1.8V)
57	VCCC	–	Bass control power supply (3.3V)
58	GNDC	–	Bass control GND
59	FSR_1	O	Digital audio LR clock
60	SCKR_1	O	Digital audio Bit clock
61	PINIT	I	PLL initial pin
62	TA	I	Transfer acknowledge
63	BR	O	Bus request
64	BB	I	Bus busy
65	VCCC	–	Bus control power supply (3.3V)
66	GNDC	–	Bus control GND
67	WR	O	External memory read enable
68	RD	O	External memory write enable
69	AA1	O	Address control (Not used)
70	AA0	O	Address control (Not used)
71	BG	O	Bus control
72	A0	O	External memory address
73	A1	O	External memory address
74	VCCA	–	Address bus power supply (3.3V)
75	GNDA	–	Address bus GND
76	A2	O	External memory address
77	A3	O	External memory address
78	A4	O	External memory address
79	A5	O	External memory address
80	VCCA	–	Address bus power supply (3.3V)
81	GNDA	–	Address bus GND
82	A6	O	External memory address
83	A7	O	External memory address
84	A8	O	External memory address
85	A9	O	External memory address
86	VCCA	–	Address bus power supply (3.3V)
87	GNDA	–	Address bus GND
88	A10	O	External memory address
89	A11	O	External memory address
90	GNDQ	–	Quiet GND
91	VCCQL	–	Quiet core power supply (1.8V)
92	A12	O	External memory address
93	A13	O	External memory address
94	A14	O	External memory address
95	VCCQH	–	Quiet external power supply (3.3V)
96	GNDA	–	Address bus GND

No.	Pin Name	I/O	Function
97	A15	O	External memory address
98	A16	O	External memory address
99	A17	O	External memory address
100	D0	I/O	External memory data
101	D1	I/O	External memory data
102	D2	I/O	External memory data
103	VCCD	–	Data bus power supply (3.3V)
104	GNDD	–	Data bus GND
105	D3	I/O	External memory data
106	D4	I/O	External memory data
107	D5	I/O	External memory data
108	D6	I/O	External memory data
109	D7	I/O	External memory data
110	D8	I/O	External memory data
111	VCCD	–	Data bus power supply (3.3V)
112	GNDD	–	Data bus GND
113	D9	I/O	External memory data
114	D10	I/O	External memory data
115	D11	I/O	External memory data
116	D12	I/O	External memory data
117	D13	I/O	External memory data
118	D14	I/O	External memory data
119	VCCD	–	Data bus power supply (3.3V)
120	GNDD	–	Data bus GND
121	D15	I/O	External memory data
122	D16	I/O	External memory data
123	D17	I/O	External memory data
124	D18	I/O	External memory data
125	D19	I/O	External memory data
126	VCCQL	–	Quiet core power supply (1.8V)
127	GNDQ	–	Quiet GND
128	D20	I/O	External memory data
129	VCCD	–	Data bus power supply (3.3V)
130	GNDD	–	Data bus GND
131	D21	I/O	External memory data
132	D22	I/O	External memory data
133	D23	I/O	External memory data
134	MODD	I	Mode select D
135	MODC	I	Mode select C
136	MODB	I	Mode select B
137	MODA	I	Mode select A
138	SDI1_1	I	Digital audio data (Center/Subwoofer)
139	TDO	O	JTAG data output
140	TDI	I	JTAG data input
141	TCK	I	JTAG test clock
142	TMS	I	JTAG mode select
143	MOSI	I	Microcomputer communication data input
144	MISO	O	Microcomputer communication data output

■ PD5770B8 (MAIN CONTROL ASSY: IC501)

• Main Microcomputer

● Pin Assignment (Top view)



● Pin Function

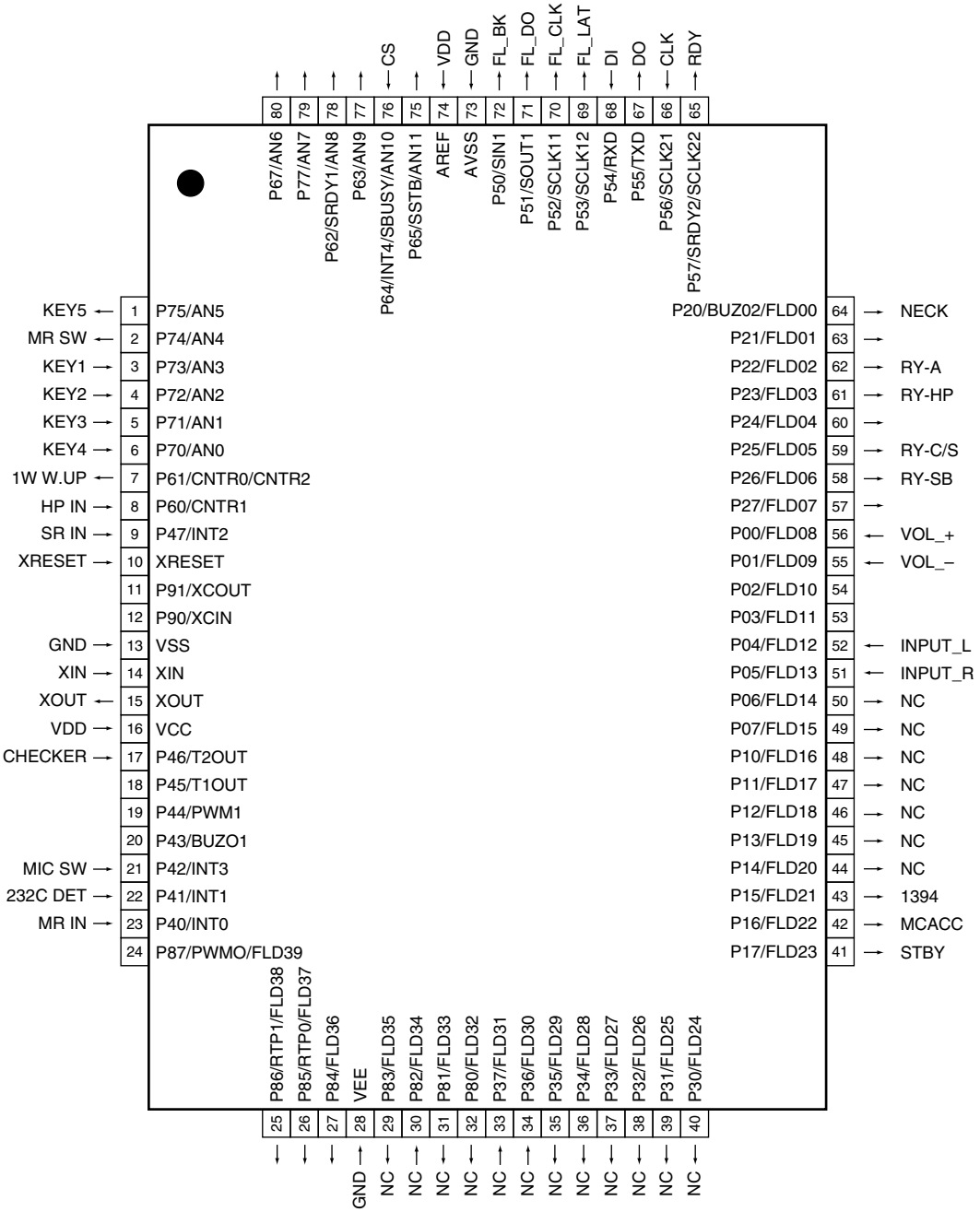
No.	Pin Name	I/O	Pin Function	Active
1	12VTRIGGER	O	"H" at O	
2	–	O	NC "L" fixed.	
3	1394 RST	O	Standby for 1394 (Not used) "L" fixed.	
4	1394 CS	O	Standby for 1394 (Not used) "L" fixed.	
5	1394 DI	O	Standby for 1394 (Not used) "L" fixed.	
6	1394 DO	I	Standby for 1394 (Not used) Standby with the circuit.	
7	1394 CK	O	Standby for 1394 (Not used) "L" fixed.	
8	GND	–	Ground	
9	CNVSS	–	5.1kΩ pulldown	
10	–	O	L" fixed	
11	–	O	L" fixed	
12	XRESET	–	Reset	
13	XOUT	–	Oscillator	
14	GND	–	Ground	
15	XIN	–	Oscillator	
16	5V	–	5V power supply	
17	NMI	I	Cannot use it as usual input port (100kΩ pullup)	
18	WAKEUP	I	Wakeup	H
19	1394 INT	I	Standby for 1394 (Not used) Standby with the circuit.	
20	1W WUP	I	Wakeup signal at standby (from the display microcomputer) (pulldown)	H
21	–	O	L" fixed	
22	DISP EN	O	Communication enabling signal to the display microcomputer	H
23	OSD RST	O	OSD-IC reset signal L: reset, H: release reset	
24	OSD CS	O	OSD-IC chip select signal	H
25	OSD CONT.	O	At data transfer to the OSD-IC: "H"	
26	DISP RST	O	Display microcomputer reset signal L: reset, H: release reset (pulldown)	
27	DISP RDY	I	Communication enabling signal from the display microcomputer	H
28	OSD/DISP CLK	O	Communication clock signal with the OSD-IC/display microcomputer	
29	DISP DO	I	Communication data in signal with the display microcomputer (N ch open drain)	
30	OSD/DISP DI	O	Communication data out signal with the OSD-IC/display microcomputer (N ch open drain: pullup)	
31	232C RXD	O	For 232C rewriting (data output)	
32	232C TXD	I	For 232C rewriting (data input)	
33	CLK	O	Not used	
34	232C CTS	O	For 232C rewriting (communication enabling)	
35	DSP DI	O	Communication data out signal with the DSP1 microcomputer	
36	DSP DO	I	Communication data in signal with the DSP2 microcomputer	
37	DSP CLK	O	Communication clock signal with the DSP microcomputer	
38	DSP1 RST	O	DSP1 microcomputer reset signal L: reset, H: release reset	
39	DSP2 RST	O	DSP2 microcomputer reset signal L: reset, H: release reset	
40	DSP1 SS	O	Slave select signal to DSP1 microcomputer	L
41	DSP2 SS	O	Slave select signal to DSP2 microcomputer	L
42	DSP MODE1	O	Mode selection of DSP1 microcomputer (ROM/RAM) H: ROM mode, L: RAM (PPP) mode	H
43	DSP MODE2	O	Mode selection of DSP2 microcomputer (ROM/RAM) H: ROM mode, L: RAM (PPP) mode	H
44	DIR DI	O	Communication data out signal with the DIR	
45	DIR DO	I	Communication data in signal with the DIR/DAC	
46	DIR CS	O	Communication chip select signal with the DIR/DAC	
47	DIR CK	O	Communication clock signal with the DIR/DAC	
48	DIR ERR	I	Lock/Unlock signal	
49	DIR RST	O	DIR reset signal	
50	DECO MUTE	I	Boot success detecting port of 1st DSP	

No.	Pin Name	I/O	Pin Function	Active
51	DAC RST	O	DAC/AD reset	
52	DSP MUTE	O	DSP Assy mute	H
53	M62429 DT	O	Data signal for multi room volume IC control	
54	M62429 CLK	O	Clock signal for multi room volume IC control	
55	EVR CS	O	Chip select signal for erectronic volume	
56	EVR CLK	O	Clock signal for erectronic volume	
57	EVR DT	O	Data signal for erectronic volume	
58	DSP HREQ1	I	Error detection signal of DSP1 microcomputer	
59	DSP HREQ2	I	Error detection signal of DSP2 microcomputer	
60	furniture	O	Furniture control signal	
61	–	O	L" fixed	
62	5V	–	5V power supply	
63	DC PROT	I	DC detection L: Detection	L
64	GND	–	Ground	
65	RC-AC	O	AC relay ON/OFF	H
66	AMUTE	O	System mute L: Mute ON	L
67	MRMUTE	O	Multi room mute L: Mute ON	L
68	tc9274f-st	O	Function SW control (STEREO)	
69	tc9274f-ck	O	Function SW control (CLOCK)	
70	tc9274f-dt	O	Function SW control (DATA)	
71	TUNER CLK	O	Clock signal of tuner control	
72	TUNER CE	O	Chip select signal of tuner control	
73	OL DET	I	Amp. overload detection L: Detection	L
74	TUNER DO	I	Data input signal of tuner control (pullup)	
75	RDS CLK	O	L" fixed	
76	TUNER DI	I	Data output signal of tuner control	
77	RDS DT	O	L" fixed	
78	RDS FM+	O	L" fixed	
79	TMUTE	O	Tuner mute	H
80	STEREO	I	L: STEREO (pullup)	L
81	TUNED	I	L: TUNED (pullup)	L
82	EXP DT	O	Data signal of expansion IC control	
83	EXP CLK	O	Clock signal of expansion IC control	
84	EXP OE	O	Output enable signal of expansion IC control	
85	EXP ST	O	Chip clock signal of expansion IC control	
86	–	O	NC	
87	–	O	NC	
88	–	O	NC	
89	–	O	NC	
90	DEM LOCK	I	Not used	
91	SIMUKE1	I	Destination read 1	
92	SIMUKE2	I	Destination read 2	
93	WATT-IN	I	Wattage detection Level detection with AD	A/D
94	TEMP-IN	I	Temperature detection Level detection with AD	A/D
95	FAN STOP	I	Fan forced stop detection	H
96	AVSS	–	Connect to VSS	
97	–	O	NC	L
98	VREF	–	Connect to VCC	
99	AVCC	–	Connect to VCC	
100	–	O	NC	

■ PD5771A (DISPLAY ASSY: IC3000)

• Display Microcomputer

● Pin Assignment (Top view)



● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	KEY5	I	KEY AD input	41	STANDBY	O	Standby LED
2	MR SW	O	Multi room input Pioneer/others L: Pioneer	42	MCACC	O	MCACC LED
3	KEY1	I	KEY AD input	43	1394	O	1394 LED
4	KEY2			44	NC	O	Non connection
5	KEY3			45	NC		
6	KEY4			46	NC		
7	1W WUP	O	1W correspondence main wakeup	47	NC		
8	HP	I	Headphone detection (active: H)	48	NC		
9	SR IN	I	Remote control input of main room	49	NC		
10	RESET	–	Reset input from the main microcomputer	50	NC		
11	NC	O	Non connection	51	INPUT_R	I	Input selector RIGHT
12	NC			52	INPUT_L	I	Input selector LEFT
13	Vss	–	Ground	53	NC	O	Non connection
14	XIN	–	Oscillator	54	NC	O	Non connection
15	XOUT	–	Oscillator	55	VOL_–	I	Volume –
16	Vcc	–	Power supply 5V	56	VOL_+	I	Volume +
17	CHECKER	I	Checker mode detection (10kΩ pulldown)	57	NC	O	Non connection
18	NC	O	Non connection	58	RY-SB	O	Surround back/SP-B relay ON/OFF (active: H)
19	NC			59	RY-C/S	O	C/S relay ON/OFF (active: H)
20	NC			60	NC	O	Non connection
21	MIC SW	I	MIC detection	61	RY-HP	O	Headphone relay ON/OFF (active: H)
22	232C DET	I	232C signal input detection	62	RY-A	O	Speaker A relay ON/OFF (active: H)
23	MR IN	I	Remote control input of sub room (active: H)	63	NC	O	Non connection
24	NC	O	Non connection	64	NECK	O	6/8Ω switch L: 6Ω, H: 8Ω, Initial: 8Ω
25	NC	O	Non connection	65	RDY	O	Communication ready with main UCOM
26	NC			66	CLK	O	Communication clock with main UCOM
27	NC			67	DO	O	Communication data out with main UCOM
28	VEE	–	Ground	68	DI	I	Communication data in with main UCOM
29	NC	O	Non connection	69	FL_LAT	O	FL DRV LAT
30	NC			70	FL_CLK	O	FL DRV CLK
31	NC			71	FL_DO	O	FL DRV DATA
32	NC			72	FL_BK	O	FL DRV BK
33	NC			73	AVSS	–	Ground
34	NC			74	VREF	–	5V reference voltage
35	NC			75	NC	O	Non connection
36	NC			76	CS	I	Communication CS with main UCOM
37	NC			77	NC	O	Non connection
38	NC			78	NC		
39	NC			79	NC		
40	NC			80	NC		

■ BU4094BCF (MAIN CONTROL ASSY: IC502)

• Expansion IC

● Pin Function

No.	Pin Name	Pin Function	Active
1	DEM_STP	Demodulator oscillation OFF/ON	H
2	DEM_RST	Demodulator reset L: RESET	L
3	NJM2279_SW1	NJM2279 video control of sub room system	
4	NJM2279_SW2		H
5	NJM2596_SW2	NJM2596 video control of main system	H
6	NJM2596_SW3		H
7	NJM2596_SW4		H
8	NJM2596_SW5		

■ BU4094BCF (MAIN CONTROL ASSY: IC503)

• Expansion IC

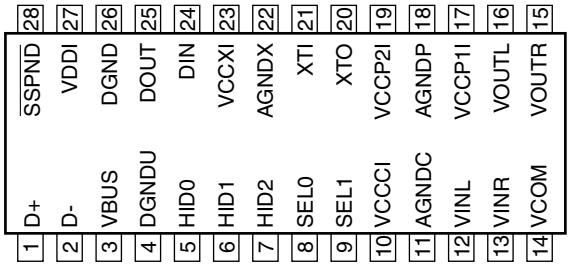
● Pin Function

No.	Pin Name	Pin Function	Active
1	OSD ON	ON at OSD on	H
2	TC9215_C34	Switch the DSP/DIRECT/MULTI CH IN of surround signal H: Multi ch input path	
3	PHONO GAIN	"H" at PHONO equalizer ON	H
4	DSDM	For SACD "L" fixed	
5	TC74HC4053_INH	Select the Component/D4 input (2 inputs → 1 output)	
6	TC74HC4053_A		
7	FAN DRIVE	ON when rotates the FAN	H
8	LOFAN	Not used "H" fixed	

■ PCM2902EG (COAXIAL IN ASSY: IC1681)

• USB Codec IC

● Pin Assignment (Top view)

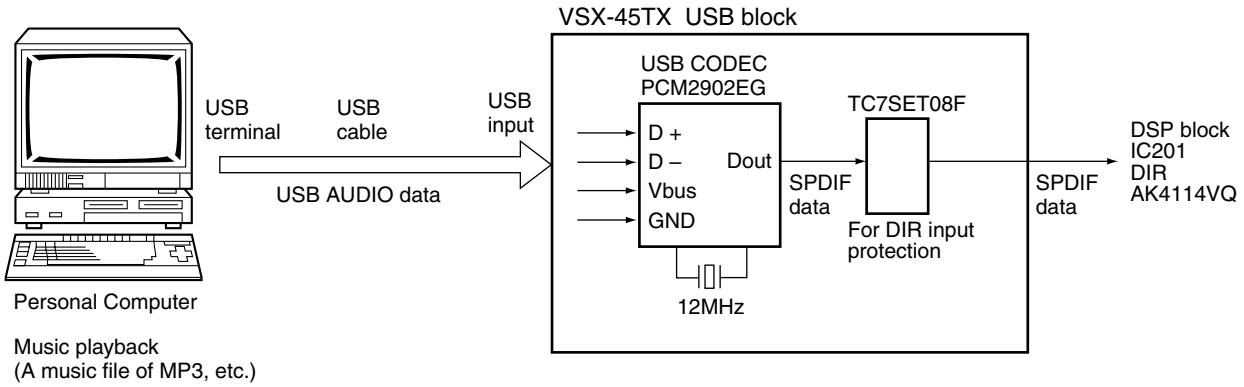


● Pin Function

No.	Pin Name	I/O	Pin Function
1	D+	I/O	USB differential input/output plus(1)
2	D–	I/O	USB differential input/output minus(1)
3	VBUS	I	Connect to USB power (VBUS)
4	DGNDU	–	Digital ground for USB transceiver
5	HID0	I	HID key state input (mute), active high(3)
6	HID1	I	HID key state input (volume up), active high(3)
7	HID2	I	HID key state input (volume down), active high(3)
8	SEL0	I	Must be set to high(6)
9	SEL1	I	Must be set to high(6)
10	VCCCI	–	Internal analog power supply for codec(4)
11	AGNDC	–	Analog ground for codec
12	VINL	I	ADC analog input for L-channel
13	VINR	I	ADC analog input for R-channel
14	VCOM	–	Common for ADC/DAC (VCCCI/2) (4)
15	VOUTR	O	DAC Analog output for R-channel
16	VOUTL	O	DAC analog output for L-channel
17	VCCP1I	–	Internal analog power supply for PLL(4)
18	AGNDP	–	Analog ground for PLL
19	VCCP2I	–	Internal analog power supply for PLL(4)
20	XTO	O	Crystal oscillator output
21	XTI	I	Crystal oscillator input(2)
22	AGNDX	–	Analog ground for oscillator
23	VCCXI	–	Internal analog power supply for oscillator(4)
24	DIN	I	S/PDIF input(5)
25	DOUT	O	S/PDIF output
26	DGND	–	Digital ground
27	VDDI	–	Internal digital power supply(4)
28	$\overline{\text{SSPND}}$	O	Suspend flag, active low (Low: suspend, High: operational)

(1) LV-TTL level
(2) 3.3-V CMOS level input
(3) 3.3-V CMOS level input with internal pulldown. This pin informs the PC of serviceable control signals such as mute, volume up, or volume down, which has no connection with the internal DAC or ADC directly. See the volume control and mute control section.
(4) Connect a decouple capacitor to GND
(5) 3.3-V CMOS level input with internal pulldown, 5 V tolerant
(6) TTL Schmitt trigger, 5 V tolerant

● Flow of USB Input Data



About PCM2902EG

- With codec of USB BUS POWERED, power is supplied from Vbus of USB, and work. (work with a power supply of VSX-45TX irrelatively.)
- Be USB codec, but analog I/O and digital (SPDIF) input are not using in VSX-45TX.
- When only connects to PC and receiver (VSX-45TX) is turned on, the output of TC7SET08F outputs.

● Help of Non-failure Decision

Symptom when a sound is not output (Symptom is different by each OS)

- Confirm a driver whether PC is recognizing it. (With a device manager).
- Is a switch of sound sourse performed properly? (Control Panel, Sound or Multimedia)
- Is volume control of PC adjusted?
- How is other PC?
- In the state that does not change PC setting, is sound output in other VSX-45TX?
- When uses CD-ROM and playback a music CD, and a sound is not output, is digital playback of CD-ROM checked?

When contain noise

- There is a bug in early USB AUDIO driver of WINDOWS XP, and contain noise once for several minutes. (Correspond with WINDOWS UPDATE.)
- An affinity problem with chip set
- Adaptation problem with chip set (refer to next item)
- Performance issue of PC. (Release resident software as measures.)
- Noise when using the other software during music playback. (Do not guarantee or do not use the other software)
- Do contain the same noise even if changes the PC?

Reference

Confirmation item of the USB part with Function checker.
Supply a power supply (+5V: pin 3, GND: pin 4) of IC1681 (PCM2902EG), and connect D+ (pin1) to GND.
Confirm that X1681 (ASS7047) starts oscillating.

Support OS	
Windows	98 / 98SE / ME
Windows	2000 Professional
Windows	XP Home / Professional

● Adaptation Problem with Chip Set

PCM2902EG caution of operation

Operating environment and findings of PCM2902EG

Evaluation PC: Libretto PAL2060 TNML made by Toshiba

(1) CPU: Crusoe 600MHz made by Transmeta
Use chip set: Transmeta N/B (North Bridge)
M1533 (South Bridge) made by ALi
OS: Windows ME

(2) CPU: Cerelon 566MHz made by Intel
Use chip set: Aladdin Pro 5 (North Bridge) and M1533 (South Bridge) made by ALi
OS: Windows ME

(3) CPU: K6-2 400MHz made by AMD
Use chip set: Aladdin 5 (North Bridge) and M1543 (South Bridge) made by ALi
OS: Windows ME

When contain noise by a problem of the chip set side, there is a problem in the PC side because even other USB audio equipment contains noise.

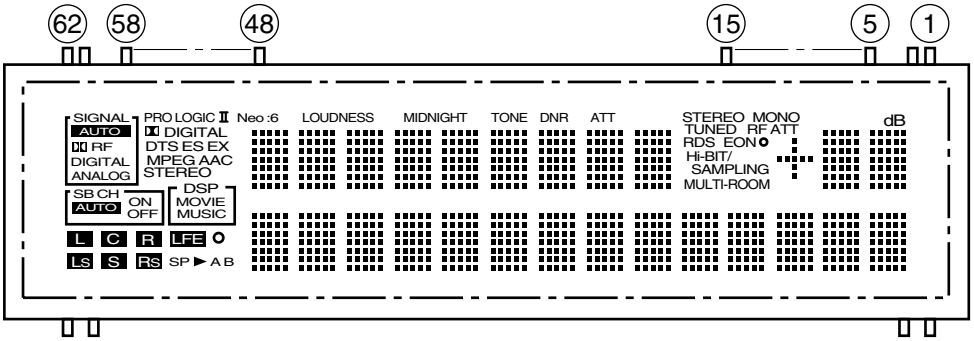
Therefore, do not recommend use in the condition and environment as mentioned above.

7.2.2 DISPLAY

■ AAV7087 (DISPLAY ASSY : V3000)

• FL DISPLAY

• Pin Assignment

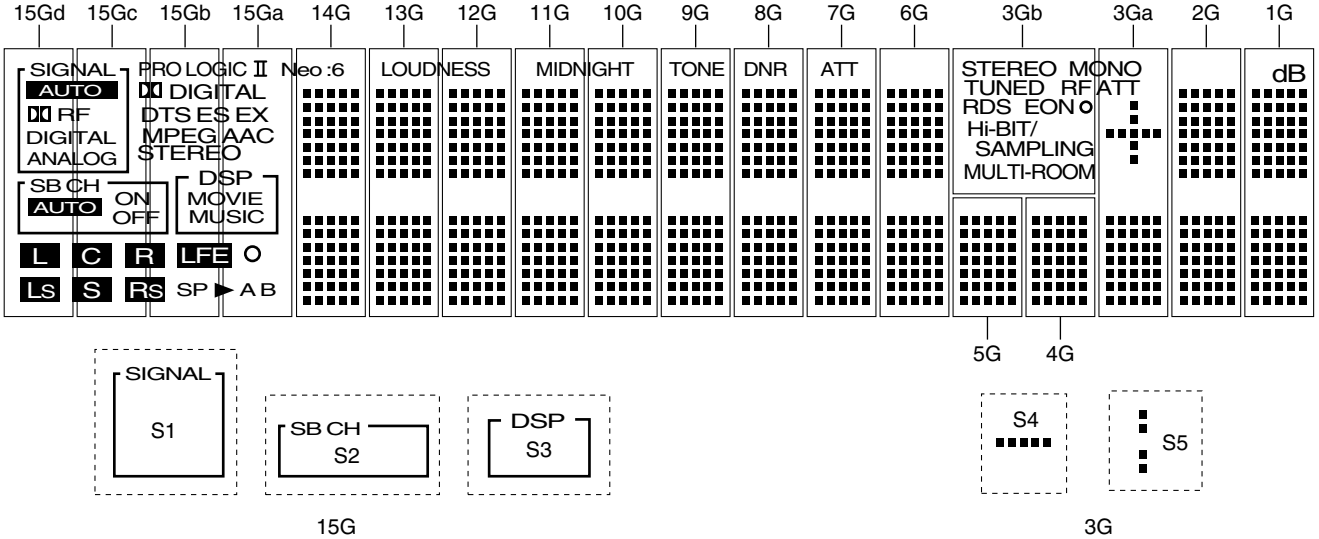


• Pin Connection

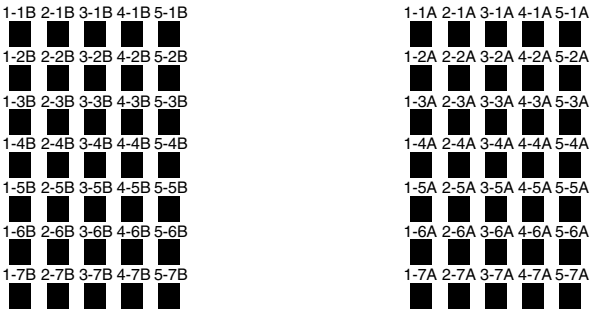
Pin No.	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47-3	2	1
Connection	F2	F2	NP	NP	GND	GND	NC	VH	NC	VDD	BK	LAT	CLK	SI	SO	NP	F1	F1

NOTE
1) F1, F2..... Filament
2) NP..... No pin (5-15 cut it by 2mm)
3) DL..... Datum Line
4) GND..... GND pin
5) VH..... High Voltage Supply pin
6) VDD..... Logic Voltage Supply pin
7) NC..... No connection
(NC pin should be electrically open on the PC board)
8) BK..... Driver Output Blanking
9) LAT..... Latch Control Input
10) CLK..... Shift Register Clock
11) SI..... Serial Data Input
12) SO..... Serial Data Output
(to be open, if don't use)
13) Field of vision is a minimum of 21°
from the lower side.

• Grid Assignment



• Segment Designation



(Lower stage)
(14G to 1G)

(Upper stage)
(14G to 6G, 2G, 1G)

• Anode Connection

	15Gd-15Ga	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3Gb, 3Ga	2G	1G
P1	Neo:6		LOUDNESS		MIDNIGHT		TONE	DNR	ATT	–	–	–	STEREO	–	dB
P2	PROLOGIC	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	–	–	MONO	1-1A	1-1A
P3	Ⅱ	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	–	–	TUNED	2-1A	2-1A
P4	S1	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	–	–	RF ATT	3-1A	3-1A
P5	AUTO	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	–	–	RDS	4-1A	4-1A
P6	RF	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	–	–	EON	5-1A	5-1A
P7	DIGITAL	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	–	–	○	1-2A	1-2A
P8	ANALOG	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	–	–	HI-BIT/ SAMPLING	2-2A	2-2A
P9	DIGITAL	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	–	–	S4	3-2A	3-2A
P10	DTS	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	–	–	S5	4-2A	4-2A
P11	ES	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	–	–	–	5-2A	5-2A
P12	EX	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	–	–	–	1-3A	1-3A
P13	MPEG	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	–	–	–	2-3A	2-3A
P14	AAC	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	–	–	–	3-3A	3-3A
P15	STEREO	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	–	–	–	4-3A	4-3A
P16	S2	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	–	–	–	5-3A	5-3A
P17	AUTO	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	–	–	–	1-4A	1-4A
P18	ON	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	–	–	–	2-4A	2-4A
P19	OFF	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	–	–	–	3-4A	3-4A
P20	S3	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	–	–	–	4-4A	4-4A
P21	MOVIE	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	–	–	–	5-4A	5-4A
P22	MUSIC	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	–	–	–	1-5A	1-5A
P23	L	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	–	–	–	2-5A	2-5A
P24	C	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	–	–	–	3-5A	3-5A
P25	R	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	–	–	–	4-5A	4-5A
P26	LS	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	–	–	–	5-5A	5-5A
P27	S	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	–	–	–	1-6A	1-6A
P28	RS	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	–	–	–	2-6A	2-6A
P29	LFE	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	–	–	–	3-6A	3-6A
P30	○	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	–	–	–	4-6A	4-6A
P31	SP ▶	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	–	–	–	5-6A	5-6A
P32	A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	–	–	–	1-7A	1-7A
P33	B	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	–	–	–	2-7A	2-7A
P34	–	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	–	–	–	3-7A	3-7A
P35	–	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	–	–	–	4-7A	4-7A
P36	–	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	–	–	–	5-7A	5-7A
P37	–	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B
P38	–	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B
P39	–	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B
P40	–	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B
P41	–	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B
P42	–	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B
P43	–	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B
P44	–	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B
P45	–	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B
P46	–	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B
P47	–	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B
P48	–	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B
P49	–	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B
P50	–	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B
P51	–	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B
P52	–	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B
P53	–	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B
P54	–	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B
P55	–	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B
P56	–	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B
P57	–	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B
P58	–	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B
P59	–	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B
P60	–	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B
P61	–	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B
P62	–	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B
P63	–	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B
P64	–	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B
P65	–	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B
P66	–	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B
P67	–	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B
P68	–	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B
P69	–	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B
P70	–	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B
P71	–	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B

• Anode Timing Chart

	15Gd-15Ga	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3Gb, 3Ga	2G	1G
P1	T18		T17		T16		T9	T8	T7	–	–	–	T3	–	T1
P2	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	T3	T2	T1
|	|	|	|	|	|	|	|	|	|	|	|	|	|	|
P11	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	T3	T2	T1
P12	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	–	T2	T1
|	|	|	|	|	|	|	|	|	|	|	|	|	|	|
P12	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	–	T2	T1
P33	–	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	–	T2	T1
|	|	|	|	|	|	|	|	|	|	|	|	|	|	|
P71	–	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	–	T2	T1

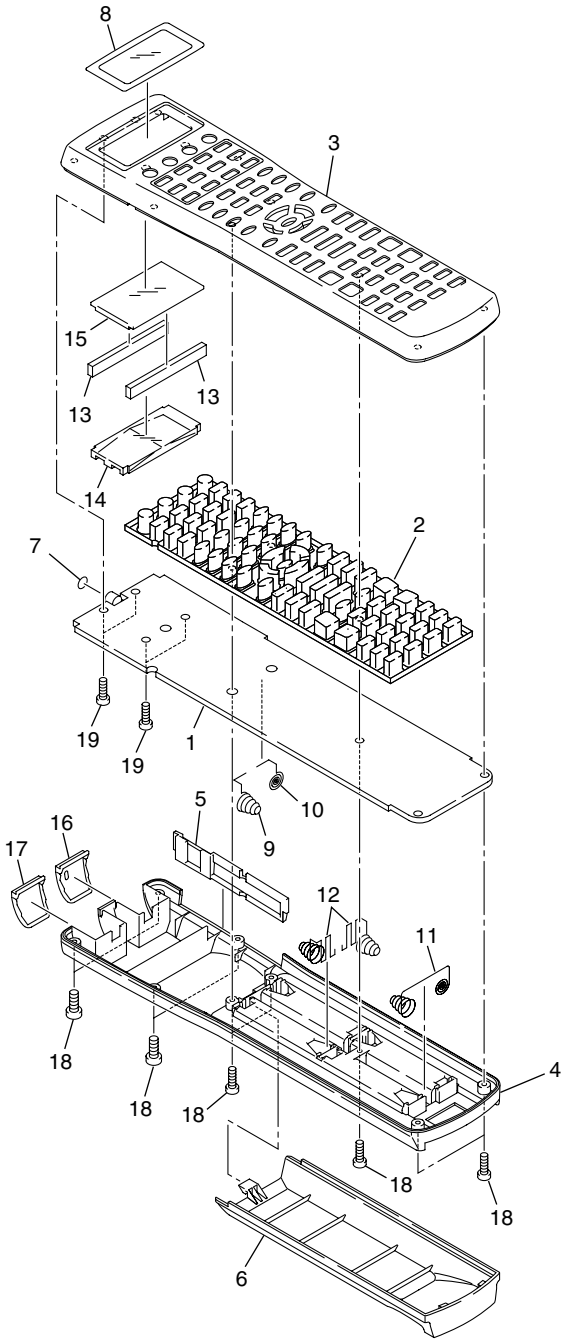
7.3 CLEANING

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	**Cleaning tools**
Fans	Cleaning paper : GED-008

7.4 REMOTE CONTROL UNIT

7.4.1 EXPLODED VIEWS AND PARTS LIST (VSX-45TX : AXD7325)

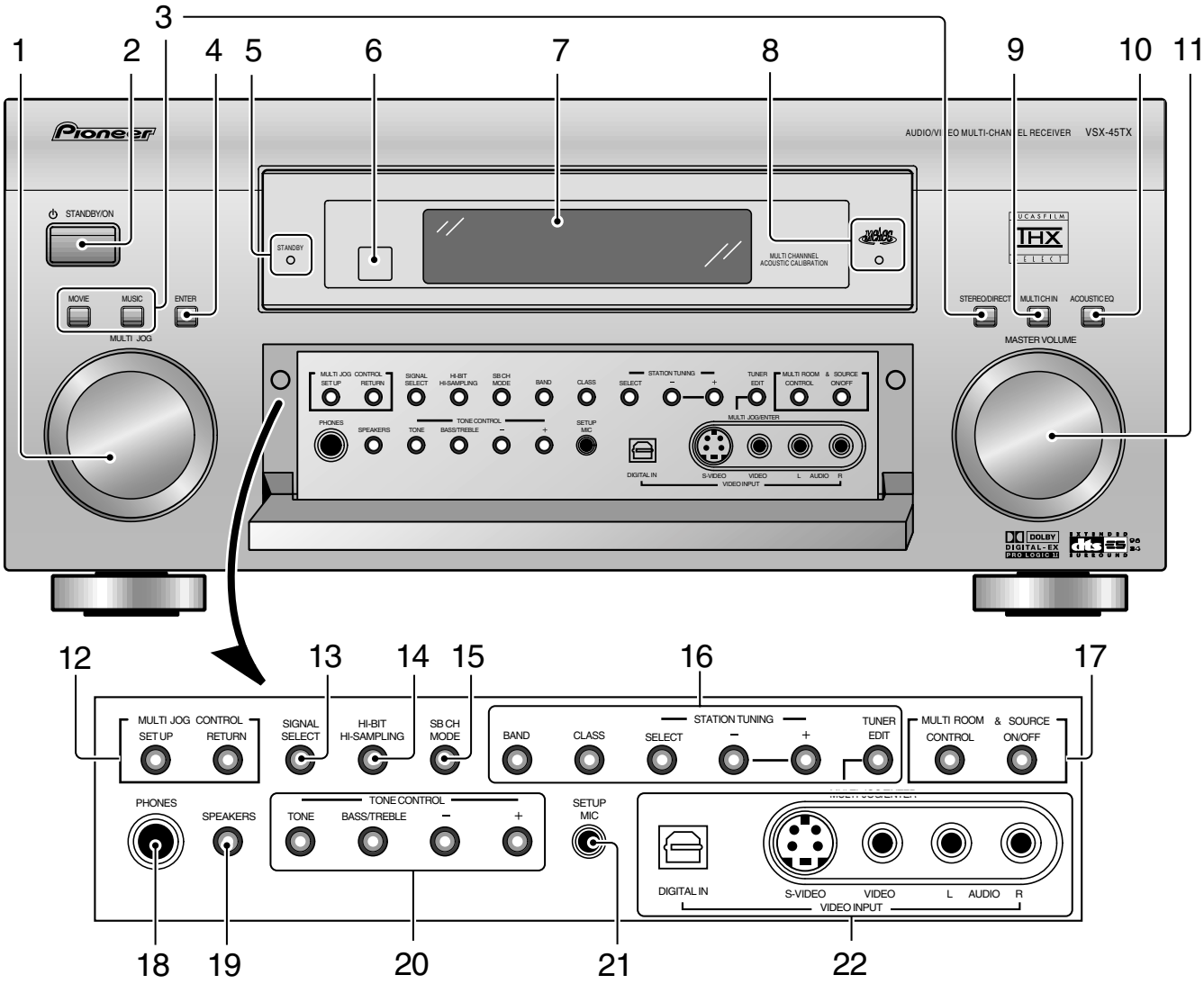


Mark	No.	Description	Part No.
	1	PCB Assy	AZC7301
	2	Rubber Key	AZA7425
	3	Case A	AZN7905
	4	Case B	AZN7892
	5	Frame	AZN7908
	6	Battery Cover	AZN7896
	7	MIC Cap	AZN7909
	8	Name Plate	201RRC-314-01L
	9	Terminal A	411RRC-212-01G
	10	Terminal B	411RRC-213-01G
	11	Battery Terminal	413RRC-143-01R
	12	Spring	413RRC-171-01G
	13	Connector	423RRC-046-01G
	14	Plate	481RRC-018-01G
	15	Shield Plate	801RRC-020-01L
	16	Filter A	811RRC-109-01G
	17	Filter B	811RRC-110-01G
	18	Screw	A-BA2008-225002
	19	Screw	A-BJ2006

8. PANEL FACILITIES

8.1 FRONT PANEL

All the controls on the front panel are explained and/or referenced here. To open the front panel push gently on the lower third of the panel.



1 MULTI JOG dial
You can use this dial for many purposes. When you press the SET UP button (12), you can use it to perform SYSTEM SETUP operations; select a function (like a DVD) or a listening mode (like Dolby Pro logic ll) or do TUNER EDIT functions (in TUNER mode).

2 ⏻ STANDBY/ON button
Press to switch the receiver ON or into STANDBY mode.

3 Listening mode buttons
There are two types of SURROUND modes:
MOVIE: Press to put the receiver into MOVIE listening mode.
MUSIC: Press to put the receiver into MUSIC listening mode.
STEREO/DIRECT: Switches the receiver into STEREO mode if it was in a different sound mode or toggles between DIRECT and STEREO mode.
DIRECT playback bypasses the tone controls and channel level for the most accurate reproduction of a program source.

4 ENTER button
Use this button to enter information concerning the system setup, listening mode or the tuner.

5 STANDBY indicator
Lights when the receiver is in STANDBY mode. (Please note that this receiver consumes a small amount of power [0.8 W] in the standby mode.)

6 Remote sensor
Receives the signals from the remote control.

7 Display

8 MCACC indicator
Lights when the ACOUSTIC CAL EQ is on. (After the Auto Surround Sound Setup has been completed the ACOUSTIC CAL EQ is set on and this display will light.)

9 MULTI CH IN button
Use this button to select the component you have hooked up to the MULTI CH IN terminals (for example, a DVD-Audio player).

10 ACOUSTIC EQ button
Press to switch on/off and select the type of acoustic calibration EQ.

11 MASTER VOLUME dial
Use to raise or lower the volume of the receiver.

12 MULTI JOG CONTROL buttons
SET UP
Press to switch the SYSTEM SETUP mode.
RETURN
Press to move back one step in the SYSTEM SETUP process.

13 SIGNAL SELECT button
Press SIGNAL SELECT repeatedly to select one of the following:
AUTO – If there are analog and digital signals input, the receiver automatically selects the digital signal.
DIGITAL – To select an optical or coaxial digital signal.
ANALOG – To select an analog signal.

14 Hi-BIT Hi-SAMPLING button
Use this button to switch the Hi-BIT Hi-SAMPLING mode on or off. Use to hear CD and DVD, as well as other digital soundtracks, at a wider dynamic range, allowing for finer audio reproduction.

15 SB CH MODE button
Use this button to turn the surround back channels on/off/auto or switch the virtual surround back mode between on/off/auto.

16 TUNER CONTROL buttons
BAND
Press to select the AM or FM band.
CLASS
Press repeatedly to switch the preset station classes.
SELECT
Switches the –/+ buttons between station memory and frequency select modes.
–/+
Selects station memories or frequencies when using the tuner.
TUNER EDIT
Press to memorize and name a station for recall using the MULTI JOG and ENTER buttons.

17 MULTI ROOM & SOURCE buttons
Press to use the multi room feature (requires an optional PIONEER Multi-Room Remote Sensor Unit MR-100 or another IR receiver).
CONTROL button
Used together with the INPUT SELECTOR to select the function or use with the MASTER VOLUME to select the volume of the MULTI ROOM system.
ON/OFF button
Use to switch MULTI ROOM function on or off.

18 PHONES jack
Connect headphones for private listening (no sound will be heard through the speakers).

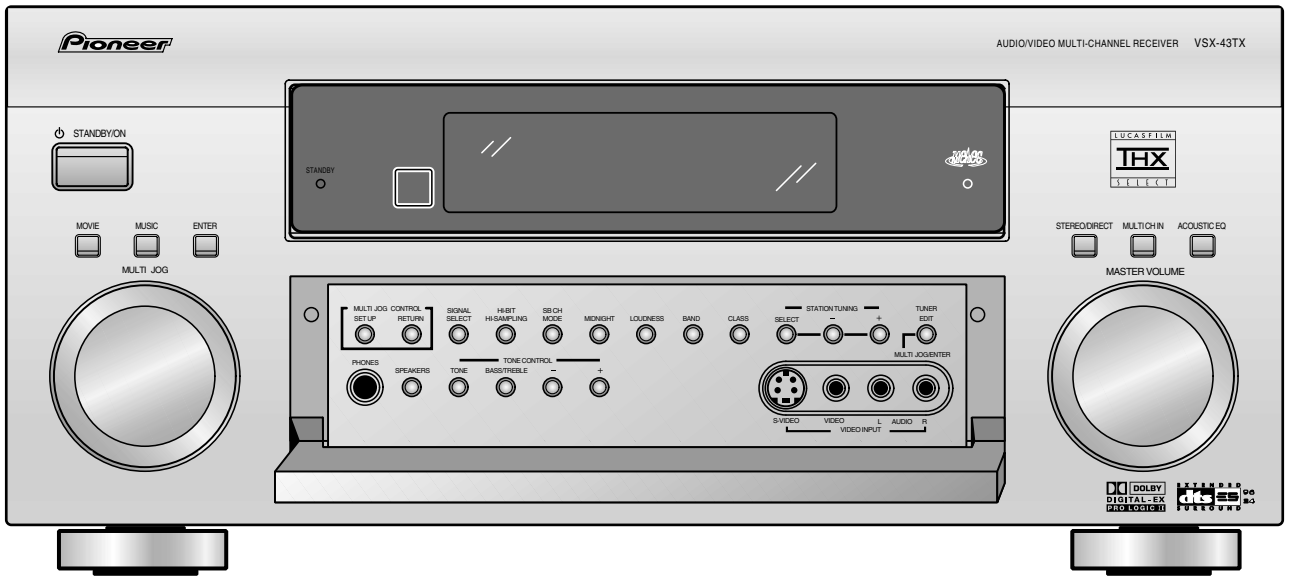
19 SPEAKERS (A/B) button
The use of this button depends on how the SURRBACK SYSTEM is set. If NORMAL SYSTEM or MR&S is chosen this button toggles between A and OFF. If SECOND ZONE is chosen this button toggles between A, B, A+B and OFF.

20 TONE control buttons
TONE button
This button switches between TONE ON and TONE BYPASS, which bypasses the tone circuitry.
BASS/TREBLE button
Use to select whether the bass or treble will be adjusted.
–/+ buttons
Use to adjust the frequency levels.

21 SET UP MIC jack
Plug in the set up mic here. This is very important in order to set up your system and get proper surround sound.

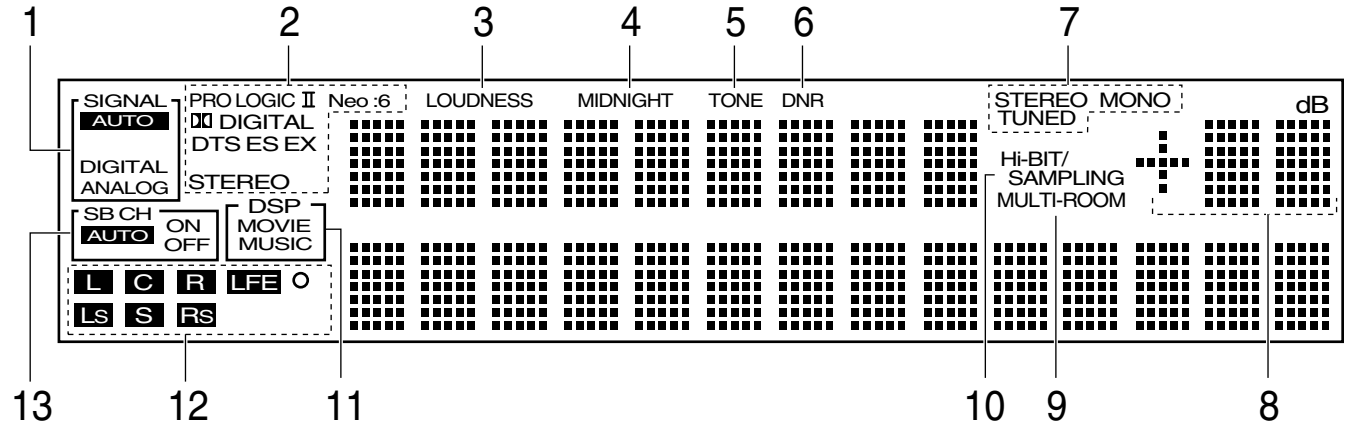
22 VIDEO INPUT jacks
DIGITAL IN
Digital input for connecting a game console, DVD player, video camera (etc.), that has an optical digital connection.
S-VIDEO
Video input for connecting a portable DVD player, video camera (etc.), that has an S video out.
RCA VIDEO /AUDIO (L/R)
Video input for connecting a portable DVD player, video camera, etc. That has standard RCA video/audio outputs.

VSX-43TX



8.2 DISPLAY

All the display information is explained and/or referenced here.



1 SIGNAL SELECT indicators
Light to indicate the input signal you selected.
AUTO: Lights when the receiver is set to select the input signal automatically.
DIGITAL: Lights when digital audio signals are selected.
ANALOG: Lights when analog signals are selected.

2 Digital format indicators
PRO LOGIC II: Lights during Dolby Pro Logic II processing.
NEO:6: Lights during NEO:6 processing.
DIGITAL: Lights when a Dolby Digital signal is detected.
dts: Lights when a DTS signal is detected.
ES: Lights when playing back a DTS ES signal.
EX: Lights when playing back a Dolby Digital EX signal.
STEREO: Lights during two-channel playback.

3 LOUDNESS indicator
Lights when LOUDNESS is on.

4 MIDNIGHT indicator
Lights when MIDNIGHT is on.

5 TONE indicator
Lights when the TONE control is on.

6 DNR indicator
Lights when DIGITAL NR is on.

7 TUNER indicators
STEREO: Lights when an FM stereo broadcast is received in the auto stereo mode.
MONO: Lights when the tuner is set to receive FM broadcasts and when MPX mode is selected.
TUNED: Lights when a broadcast is received.

8 Volume level indicator

9 MULTI ROOM indicator
Lights when the MULTI ROOM system is on.

10 Hi-BIT/SAMPLING indicator
Lights when a hi-bit/sampling mode is on.

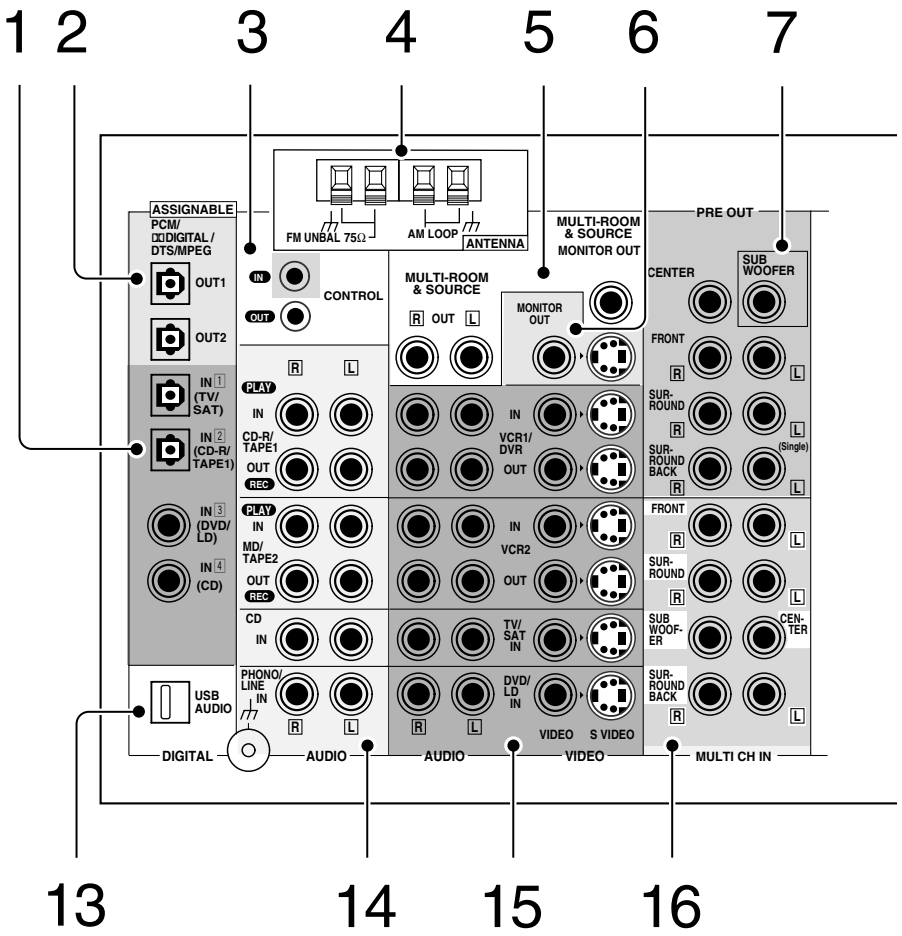
11 DSP indicators
MOVIE: Lights when a MOVIE mode is selected. When a DSP MOVIE mode is selected DSP will light with a box around it.
MUSIC: Lights when a MUSIC mode is selected. When a DSP MUSIC mode is selected DSP will light with a box around it.

12 Program Format indicators
For Dolby Digital or DTS sources: these indicators change according to which channels are active in the source. When all three **LS** (left surround), **S** (surround) and **RS** (right surround) light at the same time it means a source with a 6.1 channel playback flag is being used.
L – Left front channel.
C – Center channel.
R – Right front channel.
LS – Left surround channel.
S – Surround channel or Surround back channel.
RS – Right surround channel.
LFE – Low Frequency Effects channel.
○ **–** Lights when LFE signal is input.

13 SB CH indicators
Light to indicate the status of the surround back channels.
AUTO – Lights when the SB CH MODE or VIRTUAL SURROUND BACK mode is set to AUTO.
ON – Lights when the SB CH MODE or VIRTUAL SURROUND BACK mode is set to ON.
OFF – Lights when the SB CH MODE or VIRTUAL SURROUND BACK mode is set to OFF.

8.3 REAR PANEL

All the display information is explained and/or referenced here.



1 DIGITAL IN terminals
Use these terminals to input the signal from a DVD, CD player or any other kind of digital player. To be able to play Dolby Digital and other surround soundtracks you need to make digital connections. To do this use the digital terminals here. If you don't connect as per the default settings you need to complete "Assigning the Digital Inputs".

2 DIGITAL OUT terminals
Use these terminals to output a digital signal to a DVD-R, CD-R, MD recorder or any other kind of digital recorder.

3 CONTROL IN/OUT terminal
You can use this jack to hook up other PIONEER equipment, that has a CONTROL terminal, so that you can control them all by pointing the remote control(s) at one remote sensor.

4 Radio antenna terminals
Hook up antennas for the radio tuner built into the receiver here.

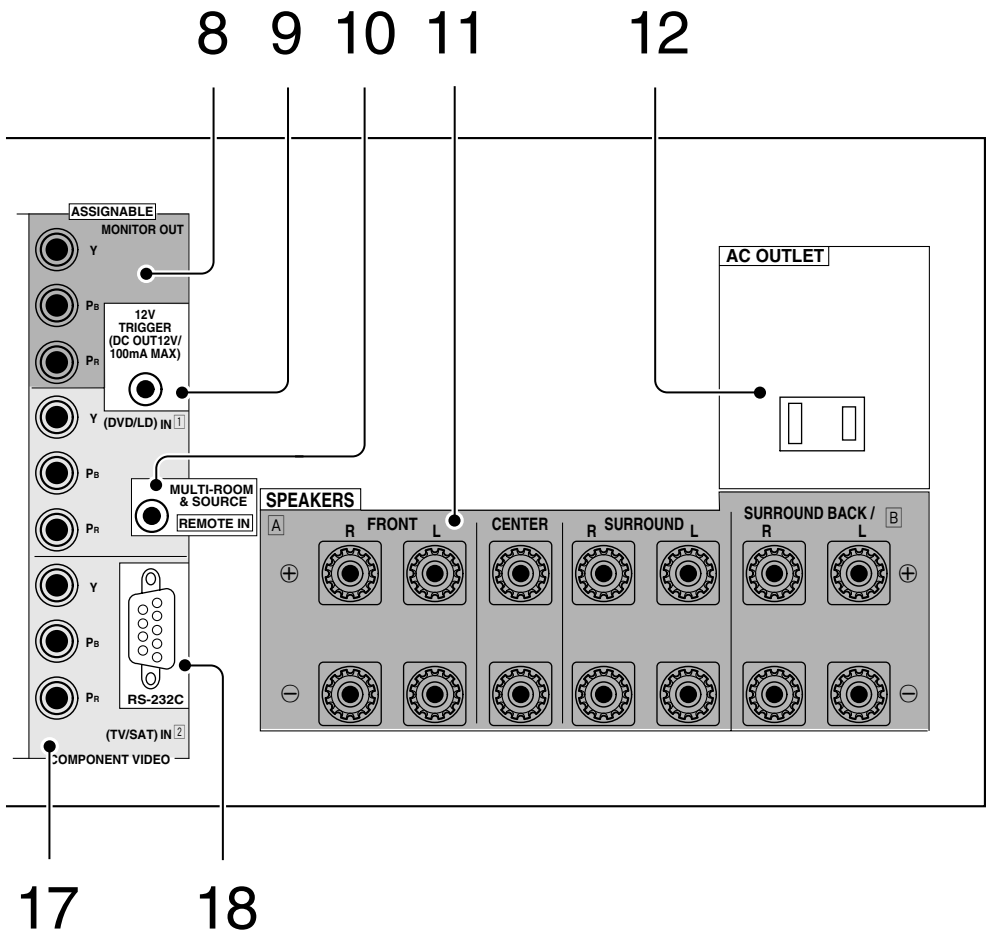
5 MULTI ROOM & SOURCE OUT terminals
These terminals output the audio & video signal to a sub-system in a secondary room. Note that the MONITOR OUT here is different than the MONITOR OUT for the main system. These are analog jacks.

6 MONITOR OUT terminals
Use this terminal to output the video signal to your TV, video projector or monitor in your main room. Be careful not to confuse this jack with the MULTI ROOM & SOURCE MONITOR OUT.

7 PRE OUT analog terminals (connect an amplifier here)
Use these terminals to output the audio signal from this amplifier to a different amplifier if that's how you choose to set up your system.

8 COMPONENT VIDEO MONITOR OUT terminals
Use these terminals to output the video signal from the COMPONENT VIDEO IN terminals to your TV. See #17 for more information.

9 12V TRIGGER terminal
Use this terminal to output a signal that can automatically turn on another component.
DC OUT12V/100mA is the maximum power.



10 MULTI ROOM & SOURCE REMOTE IN terminals
Use these terminals to hook up a sub-system in a secondary room. This hook up requires a separately sold IR receiver and allows you to use the receiver to hear different audio sources in different rooms.

11 SPEAKERS terminals
Use these terminals to connect speakers to the receiver. The FRONT, CENTER and SURROUND terminals are for the main speaker system and the SURROUND BACK speakers can be set to either the main system, the SECOND ZONE, or the MULTI ROOM.

12 AC OUTLET (switched, 100 W max)
Hook up an external component to the power supply of this receiver. Only do this with audio or video components being used in this system and never hook up heavy equipment (like TVs, heaters, air conditioners, refrigerators, etc.) to this receiver.

13 USB AUDIO IN terminal
Use this terminal to connect a PC to this receiver.

14 Audio input/output terminals (connect analog components here)
Use these terminals to input/output the audio signal from analog components (like a cassette deck or turntable). These are analog jacks.

15 Video components input/output terminals
Input/output signals from your video components (DVD, VCR, TV tuners, SAT tuners, etc.) here.

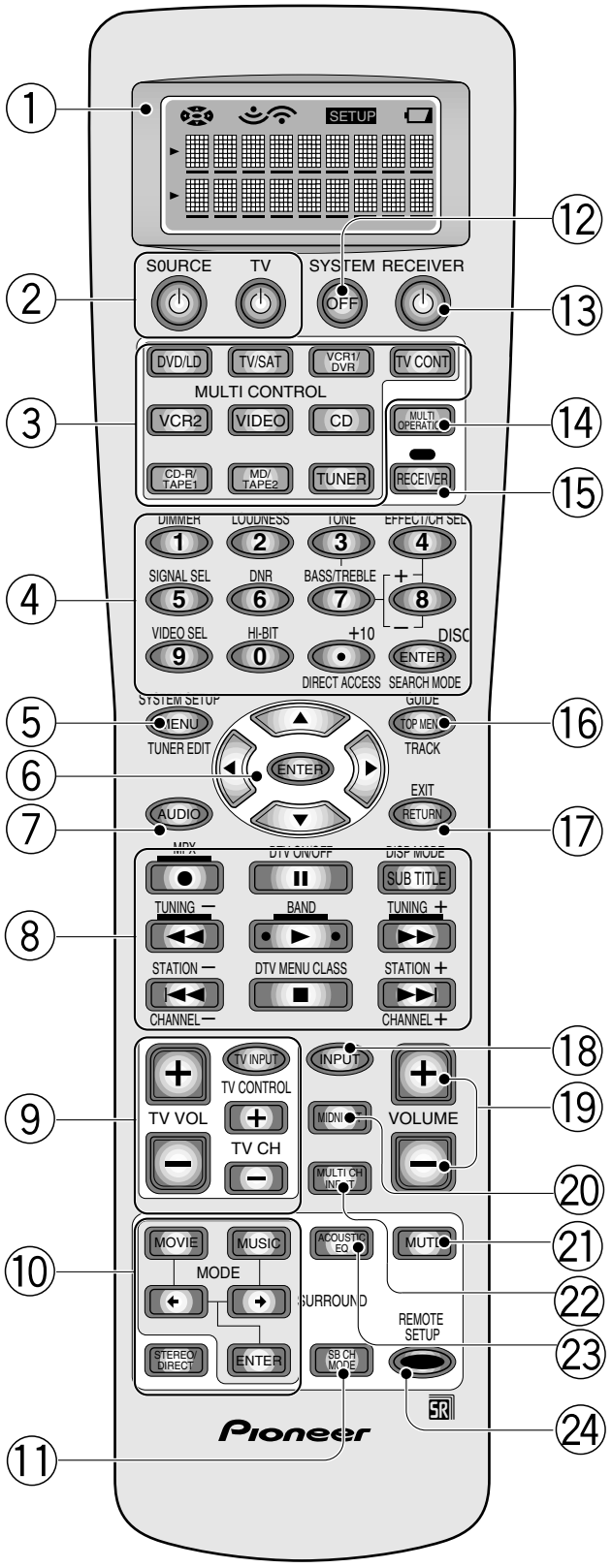
16 MULTI CH IN terminals
Use these terminals to input a multichannel surround signal (for example, a DVD-Audio signal) in an analog fashion. These are analog jacks.

17 COMPONENT VIDEO IN terminals
Use these terminals to hook up the video connections of your video components with this high quality method. Your components will have to have the terminals as well to take advantage of this kind of connection. If you don't connect as per the default settings you need to complete "Assigning the Component Video Inputs".

18 RS-232C Connection
This is a future-oriented port that has the possibility on inputting and/or outputting information to/from the receiver.

8.4 REMOTE CONTROL UNIT

This page describes the buttons on the remote control used to operate the receiver.



① **Remote Control Display Screen**

② **SOURCE ⏻ button**
Use this button to turn on/off other components. You must input the preset code in order to use this function.
TV ⏻ button
This is a dedicated TV button. Use it to turn on/off your TV.

③ **MULTI CONTROL buttons**
These buttons are the basic controls that switch the mode of the receiver and the remote control, which allows you to control your other components.

TV CONT: Press so that the remote control can operate the TV control commands.

④ **Number buttons**
These can be used for many purposes depending on the mode of the remote control.
When in receiver mode the buttons operate as below:
Display DIMMER
Use to adjust the brightness of the receiver's display.
LOUDNESS button
Switches the LOUDNESS mode on or off (for all modes except THX CINEMA and MULTI CH IN).
TONE button
This button switches between TONE ON and TONE BYPASS, which bypasses the tone circuitry.
BASS/TREBLE buttons
Use to select whether the bass or treble will be adjusted.
(+/–) buttons
Use to adjust the TONE level, effect level and channel level as well as make Dolby Pro Logic II music parameter settings.
EFFECT/CH SEL. button
Switches between the different channels so you can add volume individually to each channel with the + and – buttons. Also selects EFFECT mode of Pioneer original sound modes and Dolby Pro Logic II music parameter settings. You can then use the + and – buttons to make these adjustments.
SIGNAL SELECT button
Press SIGNAL SELECT repeatedly to select one of the following:
AUTO – If there are analog and digital signals input, the receiver automatically selects the digital signal.
DIGITAL – To select an optical or coaxial digital signal.
ANALOG – To select an analog signal.
DIGITAL NR (DNR) button
Switches the DIGITAL NR on or off.
VIDEO SELECT button
Use to toggle between the different video input possibilities.
HI-BIT button
Use this button to switch the Hi-BIT Hi-SAMPLING on or off. Use to hear CD and DVD, as well as other digital soundtracks at a wider dynamic range, allowing for finer audio reproduction.

⑤ **SYSTEM SET UP button**
Use for all system setups, including the speaker and sound systems. For more information see. “Setting up for Surround Sound“ starting on page 36. For a DVD player use this button to bring up the DVD menu and for a tuner use this button in the same way as the TUNER EDIT button.

⑥ **▲/▼/◄/►/ENTER buttons**
These buttons can be used for a variety of operations in the SYSTEM SETUP menu.
These buttons are used to control the menus for other components when in those modes (DVD, digital TV tuner, satellite tuner, cable tuner, etc.). In TUNER mode, they can select a station and/or a frequency.

⑦ **AUDIO button**
Use to switch the audio tracks of a DVD when in DVD mode.

⑧ **Command button for other components**
Use these buttons to control other components you selected with the MULTI CONTROL buttons. You must input the preset code in order use this function.

⑨ **TV CONTROL buttons**
The following buttons are used to control the TV only and can be used once they are preset to control your TV.
TV INPUT: Press to select the input source for the TV.
TV CH +/– : Use these buttons to change the channel of the TV.
TV VOL +/– : Press to control the volume of the TV.

⑩ **Listening mode buttons**
SURROUND buttons (MOVIE, MUSIC, ⬅ ➡ & ENTER):
MOVIE: Press to put the receiver into MOVIE listening mode.
MUSIC: Press to put the receiver into MUSIC listening mode.
⬅ ➡: Use to select the MOVIE or MUSIC listening mode.
ENTER: Use this button to enter information concerning the listening modes.
STEREO/DIRECT: Switches the receiver into STEREO mode if it was in a different sound mode or toggles between DIRECT and STEREO mode.
DIRECT playback bypasses the tone controls and channel level for the most accurate reproduction of a program source.

⑪ **SB CH MODE button**
Use this button to turn the surround back channels on/off/auto or switch the virtual surround back mode between on/off/auto.

⑫ **SYSTEM OFF button**
This button turns off components in two ways. First, when pressed it will turn off all PIONEER components. Secondly, any component that has programmed into the SYSTEM OFF settings will be turned off.
For example: If you programmed power off in the SYSTEM OFF settings for your TV and VCR, pressing the SYSTEM OFF button will turn off these components even if they are not PIONEER products.

⑬ ⏻ **RECEIVER (standby/on) button**
Press to turn power of the receiver on or to standby (off).

⑭ **MULTI OPERATION button**
Use this button to start the MULTI OPERATION mode. For how to program and use the MULTI OPERATION mode.

⑮ **RECEIVER button**
Use this button to switch the remote control into receiver mode in order to get certain receiver functions or do receiver setups.

⑯ **TOP MENU/GUIDE button**
Use to find stations or menus on a digital TV tuner. For a DVD player use this button to bring up the DVD menu.

⑰ **RETURN button**
When you are in a receiver setup operation this button will go back one step in the SYSTEM SETUP procedure. When you are using your DVD menu screen this button acts the same as the DVD player's "Return" button. When you are using cable tuners, satellite tuners or digital TV tuners this button will either exit you from the menu screen or act like a "Return" button above, depending on the maker of the unit.

⑱ **INPUT button**
Press to select an input source. The button will cycle through all the possible sources.

⑲ **VOLUME (+/–) buttons**
Use to raise or lower the volume of the receiver.

⑳ **MIDNIGHT button**
Switches the MIDNIGHT listening mode on or off (for all modes except THX CINEMA and MULTI CH IN).

㉑ **MUTE button**
Press to mute or restore the volume.

㉒ **MULTI CH INPUT button**
Use this button to select the component you have hooked up to the MULTI CH IN terminals (for example, a DVD-Audio player).

㉓ **ACOUSTIC EQ button**
Press to switch on/off and select the type of acoustic calibration EQ.

㉔ **REMOTE SETUP button**
Use to customize the remote control functions and the remote control itself.

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